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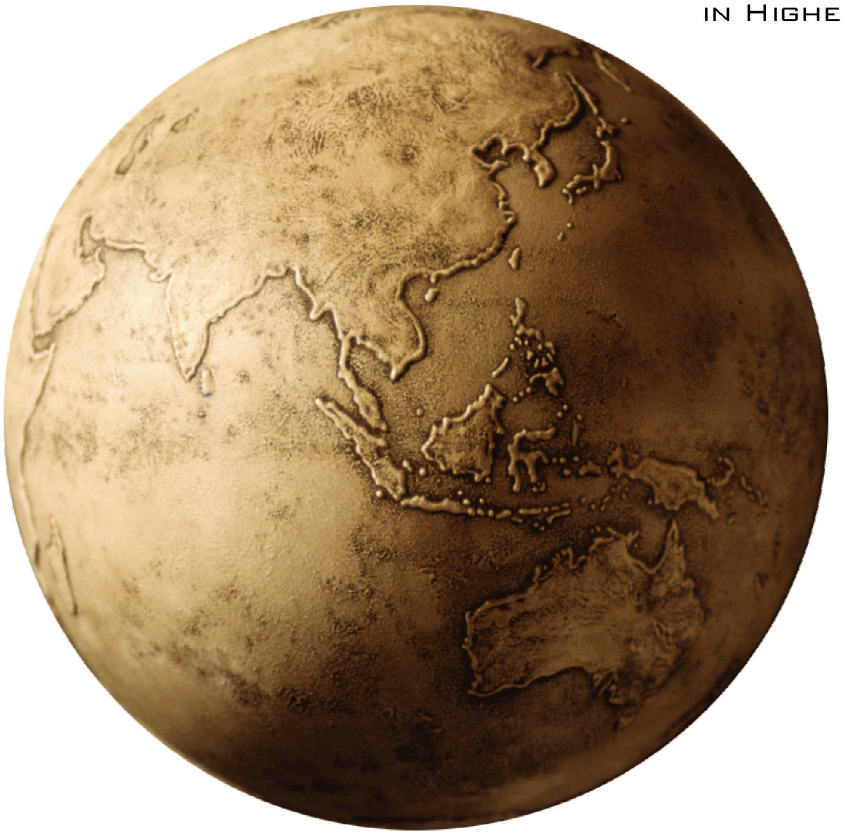

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Purpose

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.

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Research Articles

Instructional Articles

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Developing a Lecturer Workshop for Using Tablets in the Classroom

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This paper is about a framework as heuristic to design and develop a workshop for academic teaching staff to use tablets for teaching and learning in the classroom at the University of Johannesburg (UJ). Theories of Cultural-Historical Activity and Engeström's activity systems are also incorporated, as are a critique and a critical analysis of the progressive development of a workshop focusing on tablets in the classroom. Currently, mostly first-year student lecturers are involved: 150 participants attended six workshops over six months. The research question incited the following design-based research: how is a workshop developed for lecturers to use tablets for teaching and learning in the classroom? The phases of this include a review of the needs analysis, formative development, evaluation of effectiveness, and documentation, which serve as the outline of this report. Findings and conclusions are presented around interactions, collaboration, use of open spaces, formative assessment, progressive skills development, and a short evaluation.

Technological developments in higher education brought about many infrastructural changes affecting the way we teach and learn. This paper starts by describing the context of the comprehensive University of Johannesburg, South Africa, and how its mission derived drives for using tablet devices in the classroom. The use of tablets in the classroom consequently demanded an interactive workshop to be designed and implemented with academic teaching staff. This task was accepted by the Centre for Academic Technologies (CAT) at the university. The research problem for this research is situated in the question: How is a workshop developed for lecturers to use tablets for teaching and learning in the classroom?

This paper describes how a newly implemented theoretical framework (CAT framework) is used as heuristic which encapsulates the Cultural-Historical Activity Theory (CHAT), Vygotsky's basic mediated action triangle, and Engeström's activity systems theory. Thereafter, the research design and methodology is discussed as design-based research also known as a design experiment. The phases of the design experiment set the layout for the sections in the paper to follow. A review of the needs analysis (phase 1) becomes a detailed discussion conceptualising, rationalizing, and applying theory into the design of the workshop. The second and third phases are integrated and, as far as possible, applied to the general design of the workshop. Attention is given to incorporating principles of scaffolding and flipped teaching, e-handout development, and the expected objectives the workshop attempts to achieve.

Thereafter, the sequence of activities is given in table format and focuses on interactivity and iterations. Findings and conclusions are presented under the following headings: "Interactions and collaboration," "Using an open space for video files," "Streamlining formative assessment," and "Progressive skills development", followed by a short evaluation. Thereafter, a summary of the paper is given.

Context and Rationale

In May 2011, University of Johannesburg (UJ) disseminated strategic drives to fulfill its mission by 2020. Eight strategic drives emerged, of which the second drive is related to teaching and learning with technology and is formulated as: "A reputation as a comprehensive institution with a unique identity in the higher education sector because of the stature and quality of its scientific and technology-rich programs and its scientific and technology-driven research, innovation, and technology transfer" (University of Johannesburg, 2011, p. 5). The second drive has further been motivating the setup and infrastructural changes needed to accommodate mobile access for staff and students. This manifested over four campuses, one of the largest wide area networks in the southern hemisphere which has also become Wi-Fi compliant with various hotspots. Moreover, tablet devices have been rolled out to all first-year students phasing through to senior students over the next three years. Therefore, the institution was infrastructural ready for pedagogies involving tablets in the classroom. Until 2014, tablets have not been used interactively in the classroom. Successively, since 2014 the roll out demanded teaching staff to be familiarized with using tablets. CAT at UJ accepted the task to professionally develop teaching staff in this regard.

CAT is a multifunctional professional academic support service center. One function is that of the Teaching and Learning Consultants (TLCs), who serve nine faculties. "[T]he role of the instructional designer is diversifying and expanding to encompass a range of tasks beyond those prescriptively described in a systems approach" (Visscher-Voerman & Gustafson, as cited in Seeto & Herrington, 2006, p. 741). The authors extrapolate that design for teaching and learning is evolving towards "more constructivist learning environments in higher education [which] has also

changed the traditional instructional design role…" and that "… this is perhaps evident in the change of title that is preferred by many such practitioners – from instructional designer to *educational designer* or *learning designer*" (Seeto & Herrington, 2006, p. 741). In this paper the term *learning designer* will be used.

The same authors advocate that a learning designer is often difficult to access, which is not the case at UJ. However, what limits most learning designers is the fact that they are usually involved in the process of designing and developing new pedagogies, delivery strategies, resources, and interactive and dynamic learning environments, yet, they are rarely involved during the implementation and evaluation stages of such learning environments. From this stance, Seeto and Herrington (2006, pp. 742-743) agrees with Reeves and Hedberg (2003) in that "… they can extend the reach of their evaluations and contribute to design principles regarding interactive learning systems through a process called development research." The authors concur that *development research* (also *design-based research* or *design experiments*) is an adequate research approach, which is "particularly suited to the exploration of significant education problems and technology-based solutions – the kind of challenge faced every day in the working life of a learning designer" (Seeto & Herrington, p.741). Hence, this research does not only deliver such a design-based description but also serves as an extension of the role of the learning designer as researcher. This paper is about the process followed through a design experiment extensively to develop a workshop for teaching staff, which will enhance and motivate the use of tablets in the classroom. The essence is to establish underlying pedagogical principles in teaching staff who endeavor to use tablets in the classroom with their students.

Theoretical Foundation

The literature which relates most to this research is situated around Design-based Research Theory, Activity Theory, and specifically Cultural Historical Activity Theory, as well as the flipped classroom approach (Rosenberg, 2013). These theories are considered in this research because they impact on interaction design and also on design interaction (Kaptelinin & Nardi, as cited in Codio & Quek, 2011). Codio and Quek (pp. 2-3) also explain that theory is important during the design of activities and suggest practical reasons to use theory when developing interaction designs. Subsequently, the named theories will be used in the following discussions and will be contextually related to this research as far as possible. This section will thus become the theoretical foundation to the sections hereafter as part of the design experiment used to conduct this research.

Cultural-Historical Activity Theory (CHAT)

CHAT is a complex theory with aims toward activity and interactivity. The constituents of activity theory are stipulated by Kaptelinin and Nardi (2006) and summarized by Codio and Quek (2011, pp. 2-4): "Activity theory [*per se*] emphasises the importance of studying real-life use of technology as part of unfolding human interaction with the world." Codio and Quek (2011, pp. 2-4) summarized the principles of activity theory to be: object-orientedness, internalization/externalization of activities, interpsychological versus intrapsychological functions, mediation, and development. In brief, the hierarchical structure of activity consists of three levels and five principles:

- Level 1 − the relationship between the activity and its motive;
- Level 2 − the relationship between the actions taken and the goals to be met;
- Level 3 − the operations taking place and the conditions under which the operations take place.
- Object-Orientedness: The principle directly aims to an object which exists in the real world. In this study the object would be a tablet which needs to be mastered.
- Internalization/Externalization: Activities occurring both internal and external of an activity system emphasizing conversion from one to the other. Thus, they cannot be analyzed as they are distinguishable but inseparable. The iterative nature of this design experiment makes this principle more apparent during the *development* and *evaluation* phases (see Figure 3).
- Interpsychological versus Intrapsychological Play: This is a dichotomous play between two stages of the development of mental abilities (Vygotsky, 1986). When mental abilities are shared between the learner and other people, these abilities become interpsychological. When the sharing (social distribution) of these mental abilities is no longer necessary, they become intrapsychological within the learner. In this study, the interchangeable play between interpsychological and intrapsychological manifests during the last two activities.
- Mediation: This is the interplay between internal and external activities, also the way in which an external activity is influenced as a direct effect of internal activities. Tools directly influence interaction with reality. Consequently, tools are created, adapted and

transformed while an activity develops and progresses. Tools therefore hold specific values and principles, which mediate an activity to ultimately lead to the objective of the activity. The mediated action is a process, however as human activity, it is actually a series of processes contained within a bounded system (Yamagata-Lynch, 2010, p. 20).

- Development: This brings forth which factors influenced human interaction with reality over time. Thus, the importance of understanding the manner in which the tools are used over time also gives us an understanding of how the tools become more useful and efficient. This interplay and *tool mediation* will become clearer as CHAT is incorporated in the activity design of this research.

Furthermore, the development of the activities and interactions of a workshop will largely be design-dependent on these five CHAT-related principles. However, these principles and their constituent elements are dynamic upon adaptation to the learning environment. This standpoint introduces *mediated action* as a concept and explains the interaction with artifacts, tools, and other people in an environment which results in individuals finding new meanings in their world – this is a semiotic process which enables human consciousness development (Yamagata-Lynch, 2010, p. 16).

Identification of Bounded Systems for Activity System Analysis

The third generation activity theory involves a researcher investigating an activity system by means of facilitation to help learners to experience change. Engeström (1999) postulated that researchers should analyze the interactions in such a system. It becomes inevitable that once interaction has taken place on both social and cognitive level, these activities have boundaries. Once the boundaries have been identified, further investigation can lead to further identification of potential development and changes in human activity and contextually in societal systems (Yamagata-Lynch, 2010, p. 25). Yamagata-Lynch agrees with Engeström: "In order to engage effectively in these types of studies, investigators need a framework that will help them identify boundaries within complex systems. This boundary identification framework will guide the investigators' design, development, implementation, and analysis processes" (p. 25). He further proposes that investigators should develop questions which address activities that mediate. Moreover, Yamagata-Lynch (2010, pp. 25-26) extrapolates: "Investigators then need to design the data collection methods to specifically capture information that will enlighten them about their participants' mediational processes." Amory (2012, pp. 4-5) summarizes the interactions of an activity system (shown in Figure 1) by raising the role of technology in such systematic interactions. He clarifies concepts which are often confused and interpreted from various perspectives, including the following:

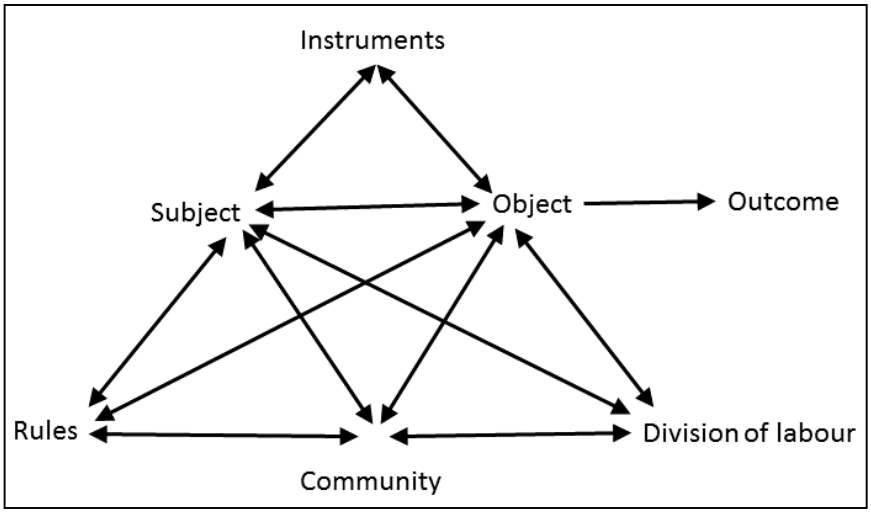
- Tool mediation: the concept of learning with technology (as opposed to learning from technology);
- Object of activity: learning from technology, and
- Actors: people who use a course management system. In such a course management system, three mediators of an activity are affected: "the *tool* that functions at the psychological level, the administrative *rules* that can be disruptive and stakeholder groups that play different roles (the *division of labour*)" (Amory, 2012, p. 4).

Considering the need to professionally develop teaching staff to purposefully interact with students in a classroom by means of a tablet, a workshop should thus be designed. This workshop needs to be activity-based and the activities should be authentic. This brief description of the immediate needs analysis gives way to make use of a heuristic based on CHAT. Such a heuristic is the CAT framework used by CAT.

The CAT Framework

This framework is rooted within the Vygotskyan paradigm of social constructivism. Later developments have brought about CHAT wherein other variables such as culture and history assume integral, interpretive roles. One such a role is technology as a mediating tool. However, the common interpretation of using ICT in education is often confused with the notion of learning *from* technology and not by learning *with* technology (Amory, 2012, pp. 4-5). He argues that technology holds the potential to support individual transformation but "the technological tools are mostly designed and used to support instructivist practices" (Amory, 2012, p. 5). He further poses that the social constructivist understanding of tool mediation (CHAT) and the familiar, collective use of educational technology (instructivist) could be solved if ICTs were to be used in teaching and learning as: information stream; enabler of communication; enabler of collaboration; information transformation tool, and professionalization tool. Amory (2012) concludes that: "[e]ducational technology can thus act as the mediating artefact to support knowledge construction in a designed activity system…" and that "[t]he use of

Figure 1
Activity System Diagram



*Note. Adpated from Engeström, as cited in Amory, 2012

CHAT, collaboration (C), authentic learning (A), and educational technologies as tools (T) to mediate learning provides an integrated framework to design learning experiences that support knowledge construction" (pp. 4-5) Therefore, the CAT framework is used as heuristic for this research. The CAT framework is given in Figure 2.

Learning by doing is the key concept substantiated by the paradigm of learning *with* technology and not learning *from* technology. Moreover, interactivity as key concept is integral to CHAT and needs to be incorporated as part of professional development. Interactivity in the classroom implies not only incorporating the latest teaching and learning technologies, but also shifting from a Socratic, chalk, talk, and demonstrative way of teaching to a diverse interactive learning experience for both lecturer and student.

Workshops and professional development learning experiences for teaching staff are developed according to the CAT heuristic and teaching staff is also familiarised with the concept. Original expectation as seen from what Reeves mention as teacher mishap ICTs e.g. as a substitute for a textbook etc. (Reeves, 2014a).

Research Design and Methodology

The research approach to this study is a design experiment. Many authors suggest this approach where new and innovative ways and working with new technologies are being discovered (Parker et al., 2013). Prevalent from a recent workshop presented by Professor Tom Reeves at UJ, Reeves (2014a) places emphasis on the use of tablets for teaching and learning and how acclimation to these new and innovative devices should be researched by using designed-based research. However, he emphasizes in another workshop (Reeves, 2014) that tool mediation is apparent as it is about learning *with* the technology and not about learning *from* the technology. Reeves further encourages three goals to be used during educational design research:

1. Examine what we believe about teaching and learning, what we believe about technology used for this purpose, and what we believe about our students. In this research, various learning theories will be used to clarify how a workshop can be designed as to familiarize lecturers on how to use tablets as a teaching technology in teaching and learning. This happens under the title of "Using Tablets in the Classroom." See Figure 3.
2. Encourage the design of authentic tasks that will support student learning. This places the focus on how tasks should be designed to have lecturers gain insight and knowledge about pedagogy for teaching with a tablet in the classroom with the aim of actual authentic learning to be implemented.
3. Educational research should be re-orientated from doing research about "things" to attempting research on the challenges which face us within the educational realm.

Figure 2

The CAT Framework (Amory, 2012)

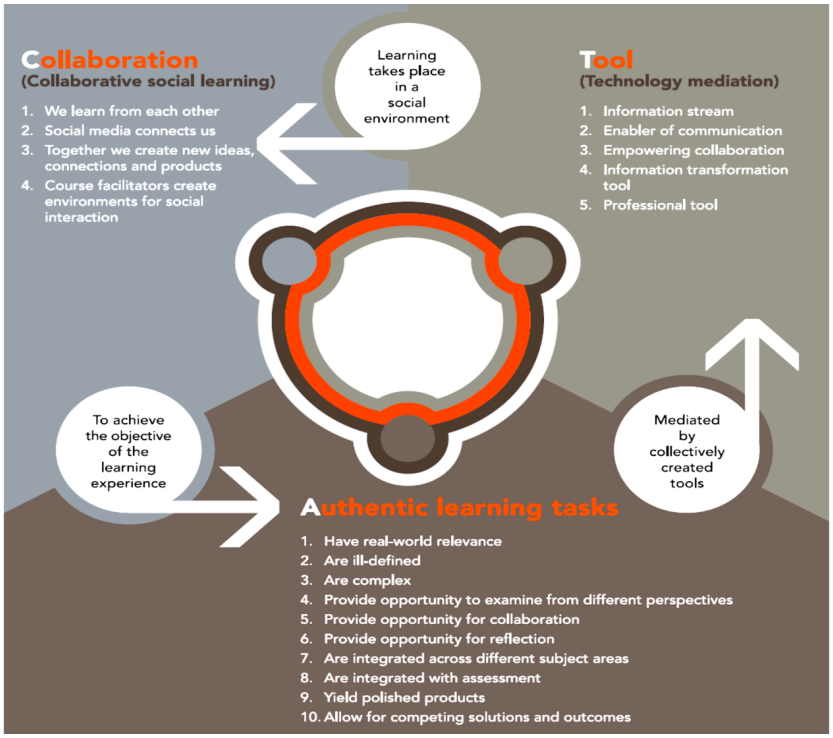
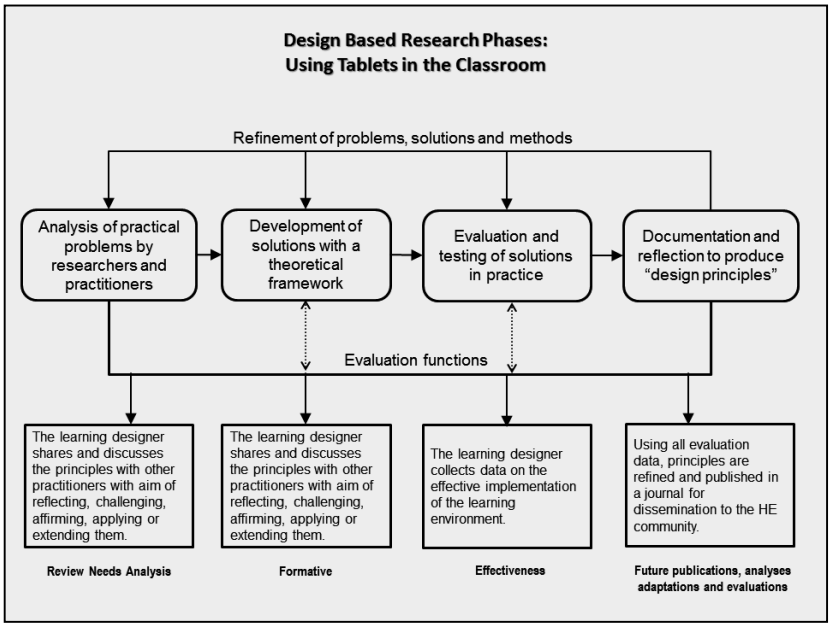


Figure 3



Design-Based Research Phases

Note. Adapted from Seeto and Herrington (2006, p. 743)

Reeves (2014) also mentions that the focus on over exhausted and inundated topics should rather focus research on problems that really impact on the South African education system.

Review of Needs Analysis

Apart from the second drive to roll out technology in teaching and learning at UJ, the basic need for teaching staff to acquire skills to basically operate electronic devices had always been the focus. This has been substantiated by training staff on how to become comfortable to use a device. The challenge escalated when sound pedagogical use of the learning management system (LMS) became priority because of an increasing number of students, limited number of venues, and a push from students who are *au fait* with using various technologies. Consequently, the LMS and face-to-face teaching are interchangeably used. Moreover, the CAT framework needed to be implemented to set the correct paradigm for UJ's *learning to be* philosophy. Another radical change also needed to be employed. This change is the perception of teaching staff that computer-related workshops are mostly based on click-and-show and show-and-tell methods. Therefore, a drastic shift from "how to" to exploring new technologies also needed to be initiated as continuation within the frame of reference constructed out of LMS and existing online use in blended learning.

Online teaching and online classrooms are thriving nowadays, and world-wide institutions are using massive open online courses (MOOCs) which are freely available (Rosenberg, 2013). However, to design a workshop, such as the one used for this study, becomes challenging as the LMS, in this case Blackboard, should also be incorporated as this is the only point of departure which the potential tablet users are familiar with. Therefore, when new technologies, such as tablets, are introduced, the reassurance is needed that online courses deliver the same quality efficacy as the courses presented in Blackboard. Pierce's findings support these claims which are positive on behalf of the students when the flipped classroom principle is used (Pierce, 2013, pp. 942-954). However, with the increase and technological savvy of our Y-generation students, the gap in digital competency is exponentially widening between them and the older generation that lectures and supposedly prepares students for a 21st century workforce. Because generation Y grew up with different technologies, they largely depend on these and also believe that these technologies better their performance. Kane (2014) describes this "tech-savvy dependency" as follows: "Armed with BlackBerrys, laptops, cellphones and other gadgets, Generation Y is plugged-in 24 hours a day, 7 days a week. This generation prefers to communicate through email and text messaging rather than face-to-face contact and prefers webinars and online technology to traditional lecture-based presentations." (para. 3). Many authors have written about the Y-generation and the means whereby teaching and learning should be adapted to compromise. However, in the 21st century the ability to communicate and work in an online environment is important and results in e-literacy and technology literacy (Becker, Fleming, & Keijsers, 2012, pp. 386-387). They explain that the "focus has now broadened to include technology as a critical literacy for all employees" (Becker et al., 2012, p. 387) and that this inclusion has impacted on previous generations in many ways.

The inclusion of technological literacy as a 21st century teaching skill has also impacted teaching staff at UJ and has become integral to CAT. Though an Australian study has been done on implementing the use of technology in professional development at a railway company, Becker and colleagues (2012, p. 387) mention crucial insight, which I feel is imperative to any needs analysis when it comes to the use of technology for teaching and learning − especially where different generations are involved. These insights are just as important when professional development for teaching staff comes to play at UJ. The authors make the following claims:

1. "Older employees often face the stereotype that they are rigid, do not want to learn, are resistant to using computers and have great difficulty using them, although this does not mean that older individuals are not interested in participating in e-learning at work" (Githens, as cited in Becker et al., 2012, p. 387). These can generally be seen as myths; however, at this stage it will enjoy some consideration regarding the needs analysis (as phase 1) of this design experiment.
2. "To implement e-learning successfully requires, amongst other things, senior management commitment, an understanding of cultural and technical obstacles and a need to be compelling to the target audience" (Henry, as cited in Becker et al., 2012, p. 387). In the case of this study, the implementation strategy for using tablets in the classroom has been an instruction from top management at UJ. CAT, as a support service center, assumes the role of developing staff to achieve this aim.
3. "If that audience comprises both older and younger employees, a further challenge involved addressing the needs and preferences of both whilst also acknowledging the importance of knowledge transfer between older and younger employees" (Becker et al., 2012, p. 387). In the case of this research, the development of the activities, planned for the workshop, must provide leverage for heterogeneous group work that includes all ages of teaching staff.

Thus, the technological literacy impact on the existing workforce of teaching and learning staff is inevitable when a needs analysis is discussed within the framework of this design-based research. Moreover, Becker and colleagues (2012, p. 387) prominently state that in all e-learning discussions a critical message is this: "Fundamental principles of adult learning, regardless of the delivery medium are still critical to any form of intervention." However, one prominent problem with designing a workshop for the purpose in this study is to cater for audience diversity in basic skills to use the device which mediates the learning interventions.

What about Scaffolding?

The concepts "workshop" and "seminar" have degraded over the past few years to a gathering where a lecture takes place in a more spontaneous environment. Workshops for professional development, in this context, is somehow interpreted as either a show-and-tell meeting or training on how to use software at navigation level. This phenomenon is inevitable when new technological gadgets are introduced. However, it becomes time consuming to bring a diverse audience on the same level to achieve the goals of the workshop. Usually, these intentions result in more workshops (on a more "advanced level") sometimes extending over a day or more. Apart from time consumption, members of different generations may either feel overwhelmed or become frustrated.

To save time on the design of lengthy workshops, a temporary solution for the overload-frustrated problem is proposed. The work of Mayer and Wittrock (2006) relates to scaffolding and problem solving centered on cognitive processes of the individual. They define problem solving as "cognitive processing directed at transforming a given situation into a goal situation when no obvious method of solution is available" (Kim & Hannafin, 2011, pp. 404-405). They also state that problem solving demands from a person that the "externally-manifested problems" be internally represented before aiming at a goal. Largely related to authentic learning, Kim and Hannafin (2011, p. 405) described "externally-manifested problems" as, for example, being "ill- or well defined problems, routine or nonroutine problems" and add on that this kind of problem solving happens through "planning/monitoring, executing, and self-regulating" cognitive activity (Mayer & Wittrock, 2006, p. 289 in Kim & Hannafin, 2011, p. 405).

However, the intention for developing basic skills in the workshop encapsulating this study embraces another argument as a prime from Vygotsky's work, namely the zone of proximal development (ZPD): "The link between scaffolding and ZPD provides conceptual and operational frames for design and study" (Sharma & Hannafin, 2007, p. 28). The two concepts encompass interactions between a professional and a beginner where the proficient person intervenes with a learner (the novice) to accomplish a specific task. The relationship between the ZPD and scaffolding is: "The ZPD thus supplies a conceptual framework for selecting and implementing strategies to support specific learning" (p. 28.). Consequently, in this study the flipped teaching approach was chosen to prepare teaching staff for a workshop on using tablets in the classroom.

The Flip Teaching Principle

Sharma and Hannafin (2007, p. 30) say that technology-enhanced scaffolding can be used as a motivation tool to entice and hold attention for an assortment of users and further motivate in that, "[b]y distributing extraneous cognitive load to the computer, learners and experts can both be freed to concentrate on rigorous higher order reasoning." Maybe one can hypothesize that this reasoning might contribute to a change factor implied with *technophobia* in so many cases, but that is another topic for research. Becker and colleagues (2012, p. 388) argue that regardless of the potential for differences, one cannot assume the younger generation to "… possess superior technological expertise." They further advocate that, when the focus becomes learning and information literacy, that "…just because learners may spend a lot of time using technology, this does not equip them with skills for using that technology specifically for learning or information gathering and evaluation" (Becker et al., p. 388).

However, technology-enhanced scaffolding is different from the classroom-based face-to-face interactions (Sharma & Hannafin, 2007, p. 30), and therefore, "[s]oftware constraints often limit dynamic scaffolding to interactions that can be anticipated in advance." Subsequently, in this research, the flipped classroom approach may enhance scaffolding in the sense of pre-workshop preparation so that basic skills on using and handling a tablet device may be assumed to be acquired to meet the aim of the workshop, i.e., to use the tablet in the classroom for the purpose of teaching and learning. Rosenberg (2013) argues that many people view the flipped classroom approach as untrustworthy, and others are "…holding it up as a potential model of how to use technology to humanize the classroom" (para. 5.).

Honeycutt and Glova (2014) describe the flipped classroom model in simple terms as follows: "[T]he flipped classroom has been defined as reversing what happens 'in' and 'out' of the classroom." They extrapolate that "… reversing homework and lectures

where students watch videos of lectures for homework 'out of class' and then engage in problem solving and analysis 'in class' [as part of learning events]" (para. 8.). From the literature (Becker et al., 2012, p. 388; Pierce, 2013; Rosenburg, 2013; Sharma & Hannafin, 2007, p. 30), the CHAT theory, the CAT framework, and the flipped classroom approach emerge to be the most appropriate for scaffolding a heterogeneous group, who has computer skills on different levels and needs to be prepared to use a tablet device as prerequisite for the workshop developed in this research. In addition, Blin and Munro (2008, p. 481) refer to Kaptelinin and Nardi (2006) and describe competencies needed within the context of this research, as the following:

1. *Tool-related competencies*: "include knowledge about the functionality of the tool, as well as skills necessary to operate it";
2. *Task-related competencies*: "include knowledge about the higher-level goals attainable with the use of a tool, and skills of translating into the tool's functionality"; and
3. *Metafunctional competencies*: "enable understanding of how to use functional organs, recognise their limitations, and knowing how to maintain and troubleshoot them."

Therefore, I argue that using the flipped classroom model might just be the impetus for scaffolding the skills required when new technology is introduced into teaching and learning to aim at higher-level use of technology and subsequently discover new pedagogies. In this research the aim, as part of the needs analysis, would be to have all workshop attendees on the same level of using a tablet device so that the "hands-on" aspect of the said workshop could deliver the rich learning experience expected. Moreover, it seems that recently commercial technological devices have become easier to use (Feinzaig, 2013). Already the field of natural user interface (NUI) is growing on a global level and can be seen in most of the recent everyday devices used. He clarifies that the combination of proximity and ease of use constitutes the natural computing category map. Therefore, my argument is that a carefully designed pre-workshop brief can be used to flip a workshop to subsequently scaffold teaching staff to be prepared when a workshop on using tablets in the classroom is presented.

A pre-workshop letter was developed from applications and setup installations that needed to be done in advance for being able to attend the workshop. The aim of this approach is to eliminate the expectations of a hands-on workshop which assumes show-and-tell or show-and-click for a tablet device. Rather, this flipped approach attempted for activities to take place not only in familiarizing users with a tablet but also to be a cause of (a) the object of the activity (i.e. to learn *with* technology) and (b) inter- and intra-psychological activities and assimilation to occur. The integrative design approaches for this kind of needs analysis as well as the interrelated design processes become apparent once the design process and the iterations thereof will be described. The next section in this research report is dedicated to the design process and its related iterations to commence the second phase of this design experiment.

General Design and Iteration of the Workshop

The design of the workshop, substantiated by reference to theory as well as contextual reasons for the type of activities chosen, comprise this discussion. Furthermore, where iterations have taken place, it is highlighted within context and augmented as far as possible.

Prior to the workshop, a "pre-workshop preparation letter" was sent out to all participants. This letter contained a welcome note, provided minimal instruction, and required applications to be downloaded. Taking into account that the letter serves as an authentic scaffolding tool, Bower (2008, p. 4) argues that various models for the choice of media are often used and mentions that "[b]y providing a prescription for selecting a single 'correct' media choice rather than scaffolding the media selection decision-making process, the expertise of the learning designer is devalued." He further argues that this "provide[s] tools for 'structuring and coordinating activity', and 'support community building'. These are unquestionably important characteristics for a learning environment; however, they are defined at a level above the attributes of the technologies. An environment can use the properties of technologies to construct tools that accomplish these aims, and evaluations should occur at this higher level; however, such features of a learning environment are complex manifestations of more primary technological facilities" (Bower, 2008, p. 4). Contrary to these complex exercises, the infrastructure at UJ is in place, teaching staff has been equipped with tablet devices, and Wi-Fi hotspots have been set up.

The first iteration was to add a QR code for URLs. Other uses of a QR code will be described later in this paper. Consequently, searching and downloading a QR code reader of choice was added to the list of activities in the pre-workshop letter. (The questionnaire is part of a different research project which will reveal results, other than design, from this research). The apps to be downloaded are mostly free of charge, and therefore a preceding suggestion in the letter was to do the workshop preparation at work at Wi-Fi hotspots. Moreover, ensuring generation theory (discussed in section 4.1), collaboration, and sharing of knowledge as characteristics of authentic learning were provided (see 3.3 and Figure 2). This strategy attempted to

eliminate expectations of workshops becoming show-and-tell of how tablets may be used in a classroom. The activity sequence for the actual workshop will now be described.

E-Handout

The concept of an "e-handout" has not been defined. However, for the purpose of this paper, I will define it as an electronic document designed for the purpose of guiding learning in a learning environment where electronic access to digital support learning material is possible. The e-handout contains hyperlinks in various ways in order to pedagogically cause interactive knowledge construction in a micro-curriculum guided by goals and objectives. The e-handout is not the same as an e-book or iBook where content becomes part of the sequence of learning events and hyperlinks are constructed around content. For the workshop developed in this paper, the sequence of interrelated learning events are given to participants as an e-handout. The e-handout was placed in an open space namely, Dropbox. A shared Dropbox folder could be opened with a tablet and a Wi-Fi connection directly from the participant's e-mail inbox.

Objectives and Sequence of Activities of the Workshop

According to the needs analysis and review, a rubric was given as part of the e-handout. The rubric was suggested by Professor Alan Amory (Director of CAT) and also serves to give various examples of how technology could be used in the classroom. The same rubric was also used for self-assessment at the end of the workshop. The rubric has been converted into an online checklist to make peer and self-assessment easier. At this stage of the development and evaluation of the workshop, no changes have been made to the assessment procedures and activities followed. The rubric, also an outline of the objectives of the workshop, is stipulated in Table 1. To avoid tedious discussions on the activities, their design and the relevant iterations which occurred during the design process, I have summarised all of these learning events in Appendix A.

Findings and Conclusions

Most teaching staff initially needed perceptual change for attending workshops and seminars. This became the first need to be addressed during development of the activities. The approach of the flipped classroom with a pre-workshop letter was well accepted, and lecturers came prepared, not estranged, to use a tablet. Initial expectations were that a "hands-on" method covering outcomes such as touching, tapping, and finding or downloading applications were thus compromised where necessary. Many inquired whether laptops are sufficient for the workshop. This emphasized a ready to "listen and take notes" notion. However, the title of the workshop suggested pedagogy to underpin the workshop. Evidently, most of the participants were *au fait* with the general navigation and working of the tablet device. Extra devices were made available for those participants who did not receive one. Hence, everyone attending the workshop was relatively on the same level of readiness. Participants not fully comfortable with the pre-workshop arrangements were assisted before the scheduled times.

Another iteration intervened, namely, that a QR code reader/scanner was needed for two activities. Furthermore, the participants suggested an online community of practice in Blackboard wherein apps are shared, discussed, and recommended for different uses in different subject areas. This community is presently running and frequently visited – which became a topic for further research to follow. Apart from these general phenomena and conclusions, more details on findings are discussed in the next few paragraphs.

Interaction and Collaboration

Interaction and collaboration occurred both on- and offline during *Activity 2*. Participants introduced themselves, although more time was awarded to online introduction. It was expected at first not to be easy in the electronic learning environment because users had to find their way about in the discussion forum. However, this was unexpectedly not the case: the discussion board became threaded with replies to introductions of others. I am of the thought that familiarity with social platforms such as Facebook have already familiarized participants with online social interaction. As the participants were in a close physical environment, a simultaneous online conversation took place. Responses recorded by means of pre- and post-workshops questionnaires revealed that collaboration took part among lecturers to complete the tasks in the pre-workshop letter. The reader should take in regard that the data aims more at the Technology Acceptance Model (TAM) which is not the focus of this paper.

Using an Open Space for Video Files

Video file-types from vlogs (e.g., YouTube), are more easily accessible from a shared folder in open space, e.g., Dropbox. The design principle of less clicks and faster downloading of video, I suppose, elicited this iteration. The first link to the video used in *Activity 3* determines the path to the final video: viewing of a video should not result in a map for a treasure hunt! Alternatively, video links can be hyperlinked to a shared folder in a reference list provided proper referencing. However, in this study, the video

Table 1
Rubric – Examples of Ways in Which Technology Could Be Used in a Classroom

	Application	Integration	Creation
Administration	• Taking register	• Using the Blackboard grade centre • Student e-submissions • Evaluation of Blackboard user reports	• Online interactive marking • Peer online assessment • Assessing students who might be at risk
Information	• Announcements • Reporting test/assignment results • Distribution of e-rubrics for assessment • eLearning guides	• Display of web content during class • Student use of search engines to find information • Discussion forum	• Use of an electronic rubric for assessment • Use of Twitter feed in class • Exploring institution databases during class • Using research software during class
Communication	• Use of email, calendar and SMS	• Social networking • Group discussions	• Online tutorial facilitation • Group assessment by students
Collaboration		• Group assignments • Team teaching • Online discussions	• Team teaching • Intra-institutional interactions • Peer reviews • Group projects
Transformation			• Re-representation of concepts • Authentic tasks and assessments • eProductions of relevant artefacts
Professionalization			• Data analyses using research software • Use of "tools-of-the-trade" (e.g. CAD)

Note. Developed by Amory (2014).

was an integral part of the activity. Therefore, a hyperlink was added in the e-handout. Moreover, the video could be replaced in another context as a reusable artefact. Open space gives immediate access to a questionnaire, formative assessment, or discussion as integrated interactivity. The questionnaire (voting poll) and responses were, in this case, recorded and released to the group at once. Icons were appropriately used in the e-handout accommodating different learning styles while providing an example for the same reason. Hyperlinks served the same dual purpose. This tendency had an impact on requested further workshop development. This will be discussed in the final paragraph of this section.

Streamlining Formative Assessment

Activities *3a* to *3c* (indicated in Appendix A) were seeded with notions for formative assessment and immediate feedback. The groups further concluded that tablets can be shared with different login credentials during interaction. I further conclude that expensive devices, such as clickers, can be substituted with mobile

devices (smartphones and tablets) to convey "expensive" pedagogies to students. Furthermore, a projected QR-code is easy to scan with tablets and smartphones. This procedure extensively reduces turnaround time for reading and responding, resulting in more focused learning. Ultimately the participants become more involved in the actual activity than with navigational obstacles and downloading time. Likely, financial strain on students is eliminated as expensive devices such as clickers and PDAs have limited multiplicity as opposed to smartphones and tablets. Moreover, bulky devices are not generally owned by students and are mostly used explicitly for gathering field data, which can only be analyzed and discussed after the actual data gathering exercise (Clark, 2007, pp. 7-13). Divergently, quick data gathering in a classroom may promote and stimulate discussion or debate. This occurrence, within its unique context and relevance to current issues, leads to a classic authentic task whereby students are guided towards implicit activities with deeper reflection. Therefore, such authentic tasks answer questions to whether intervention with a poll has pedagogic value. It further largely contributes to better affordances for using tablets in the classroom.

Progressive Skills Development

Activity 4 presumed an accumulation of various skills acquired during the workshop. However, it was expected that participants should gain more soft skills and thinking skills during on- and offline interactivity within a group. In an assumption to establish this expectation, a mini e-Portfolio should have been compiled within 45 minutes of group work linking onto the next activity where the e-Portfolio is presented to other groups in the same workshop.

Provision was made for submitting the final portfolio in Blackboard as an attachment in a forum prepared for this purpose. Interestingly, participants started to send portfolio information to other group members by using email and open spaces in the *cloud*. It was argumentatively decided not to make it mandatory to use the Blackboard option. It became apparent that the actual, true use of a tablet manifested once the collaboration within the groups started: authentic learning and creativity elicited problem solving skills, thus allowing for finding solutions on how to construct a portfolio. Interactivity within a group caused for the exchange of data by sending files electronically among different group members. Subsequently, files were exchanged via email, Dropbox folders were created and shared, and even presentations were backed up. It became noticeable that the users quickly got acquainted with the basic use of downloaded applications, specifically *Keynote* and *Prezi*. The assumption can be made that the pre-workshop preparation (flipped principle) largely contributed to acquiring these skills. Collaboratively, group members quickly associated icons with relevant meaning and function and could easily apply these according to their needs. Therefore, the submission of the final, polished product (e-Portfolio) via Blackboard is proposed to be a suggestion to participants rather than an instruction. One can further conclude that true facilitation took place in this workshop mediated by the e-handout. Moreover, group members became progressively autonomic once challenged with the variety of activities.

Evaluation

The workshop has shown to be highly interactive and effective, and thus far no further iterations are required. However, the implementation of using tablets in the classroom assumes many pedagogical approaches and should not be regarded as a panacea for educational challenges and learning sequences, but rather as a step closer to a *superior ratio decidendi.* This research gives leverage for more to follow. Further investigation is needed on the following:

1. The effect of visited hyperlinks and color difference (visited hyperlinks), as well as the impact on the learning sequence − especially the relationship to HCI (human-computer interaction);
2. Designing and implementing a possible rubric for assessing workshops of the same nature as the one used in this research;
3. Focusing on teaching staff, TAM (Technology Acceptance Model), and the effect on using new technologies in the classroom for teaching and learning.

The interventionist nature of the workshop provides exploration for many inseparable issues, such as those stipulated above. More so, these issues have now escalated to requests for more tablets-in-teaching related workshops.

Requests for Further Workshops

Workshops are currently being developed on creating electronic educational artefacts, related activities, and e-handout design and development. "Design" becomes the focus of these workshops which will be reported on once these workshops have been implemented.

Summary

Technological development in higher education has brought about many infrastructural changes, including changes to the way we teach and learn. This paper started by describing the context of the comprehensive University of Johannesburg, South Africa, and how its mission derived drives for using tablet devices in the

classroom. The use of tablets in the classroom consequently demanded an interactive workshop to be designed and implemented with academic teaching staff. The Centre for Academic Technologies (CAT) at UJ has accepted this task, developed workshops, and implemented this workshop. The research question addressed in this paper was: how is a workshop designed for lecturers to use tablets for teaching and learning in the classroom?

This paper described the theoretical framework (CAT framework) and how it was used as a heuristic condensing the Cultural-Historical Activity Theory (CHAT), Vygotsky's basic mediated action triangle, and Engeström's activity systems theory. Thereafter, the research design and methodology was discussed as a design experiment. The phases of the design experiment set the layout for the sections in the paper. A review of the needs analysis (phase one) became a detailed discussion conceptualizing, rationalizing, and applying theory into the design of the workshop. The second and third phases of the design experiment were integrated and were applied to the general design of the workshop. Consideration was given to incorporating principles of scaffolding and flip teaching, e-handout development, and the expected objectives of the workshop and what it attempted to accomplish. Thereafter, the sequence of activities was presented in table format wherein interactivity and iterations on the activities became the focus. Finally, findings and conclusions were presented.

References

Amory, A. (2012). Tool-mediated authentic learning in an educational technology course: A designed-based innovation. *Interactive Learning Environments*, *22*(4), 497-513.

Becker, K., Fleming, J., & Keijsers, W. (2012). E-learning: Ageing workforce versus technology-savvy generation. *Education & Training*, *54*(5), 385-400.

Blin, F., & Munro, M. (2008). Why hasn't technology disrupted academics' teaching practices? Understanding resistance to change through the lens of activity theory. *Computers & Education, 50*(2)*,* 475-490.

Bower, M. (2008). Affordance analysis – matching learning tasks with learning technologies. *Educational Media International*, *45*(1), 3-15.

Clark, J. D. (2007, March). *PDAs and smartphones in the classroom*. Paper presented at the Teaching and Technology Trends Symposium, Austin, Texas.

Codio, S., & Quek, F. (2011). *Embodiment interaction class spring 2011*. Unpublished manuscript, Virginia Tech University.

Engeström, Y. (1999) Innovative learning in work teams: Analysing cycles of knowledge creation in practice. In Y. Engeström, R. Miettinen, & R.-L. Punamaki (Eds.), *Perspectives on activity theory* (pp. 377-406). Cambridge, England: Cambridge University Press.

Feinzaig, L. (2013, February 5). The commercial birth of natural computing. *All Things D.* Retrieved from http://allthingsd.com/20130205/the-commercial-birth-of-natural-computing/

Honeycutt, B., & Glova, S. (2014, April 10). Can you flip an online class? *E-Campus News.* Retrieved from http://www.ecampusnews.com/top-news/flip-online-class-352/

Kane, S. (2014). *Generation Y*. Retrieved from http://legalcareers.about.com/od/practicetips/a/GenerationY.htm

Kaptelinin, V., & Nardi, B. A. (2006). *Acting with technology: Activity theory and interaction design.* Cambridge, MA: MIT Press.

Kim, M. C., & Hannafin, M. J. (2011). Scaffolding problem solving in technology-enhanced learning environments (TELEs): Bridging research and theory with practice. *Computers & Education*, *56*(2), 403-417.

Mayer, R. E., & Wittrock, M. C. (2006). Problem solving. In P. A. Alexander & P. H. Winne (Eds.), *Handbook of educational psychology* (pp. 287–303). Mahway, NJ: Lawrence Erlbaum

Parker, W. C., Lo, J., Jude Yeo, A., Valencia, S. W., Nguyen, D., Abbott, R. D., Nolen, S. B., Bransford, J. D., & Vye, N. J. (2013). Beyond breadth-speed-test: Toward deeper knowing and engagement in an advanced placement course. *American Educational Research Journal, 50*(6), 1424-1459.

Pierce, R. (2013). Student performance in a flipped class module. In R. McBride & M. Searson (Eds.), *Proceedings of society for information technology & teacher education international conference 2013* (pp. 942-954). Chesapeake, VA: AACE.

Reeves, T. C. (2014a, February). *Authentic learning.* Workshop presented at the University of Johannesburg, South Africa.

Reeves, T. C., & Hedberg, J. G. (2003). *Interactive learning systems evaluation*. Englewood Cliffs, NJ: Educational Technologies Publications.

Rosenberg, T. (2013, October 9). Turning education upside down. *The New York Times*. Retrieved from http://opinionator.blogs.nytimes.com/2013/10/09/turning-education-upsidedown/?_php=true&_type=blogs&_r=0

Seeto, D., & Herrington, J. A. (2006). *Design-based research and the learning designer*. Proceedings of the *23rd Annual Ascilite Conference,* Sydney, Australia.

Sharma, P. & Hannafin, M. J. (2007). Scaffolding in technology-enhanced learning environments. *Interactive Learning Environments*, *15*(1), 27-46.

University of Johannesburg (2011). University of Johannesburg's Strategic Drives: 2011-2020. Retrieved from www.uj.ac.za/

Vygotsky, L. (1986). *Thought and language*. Cambridge, MA: MIT Press.

Yamagata-Lynch, L. C. (2010). *Activity systems analysis methods: Understanding complex learning environments*. New York, NY: Springer

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Appendix A
Sequenced Activity Analysis

Activity in sequence	**Expected result from interactivity** What is expected from the interaction?	**Online resources**	**Iteration(s)** What needs to be addressed? Possible (new) solution Effect/Evaluation of iteration	**Attempted objectives** According to Table 1
Setting the paradigm • Presentation in *keynote* about mobility and cloud computing. • Photos of the Google centre.	• Realizing affordances brought about by tablet devices. • Mobile collaboration and wireless data transfer. • Presentations with a tablet.	• Presentation from a shared folder in *Dropbox* downloaded in a pre-downloaded application (app) of choice. • *Keynote* was used.	• Reduced to a diagram • Accessible from e-handout as a hyperlink. • Additional resources under a new heading as hyperlinks in e-handout.	• 2,3,5,6
Activity 1: Registration • Log on to a portal (uLink). • Taking an attendance register in class from device. • E-mail inbox: spreadsheet, with register.	• Class attendance register recorded with mobile device. • Students use a mobile device to register class attendance. • E-mail accessed via Wi-Fi.	• An application built, generating an attendance code. • Code captured by students (securely logged in on a portal). • Students "sign up" within window period. • Lecturer receives updated spreadsheet via e-mail.	• Hyperlink in e-handout login page. • Footnote on the e-handout also hyperlinked. • QR code embedded scanned from the presentation screen.	• 1,3,6
Activity 2: Introduce yourself The workshop participants had to introduce themselves by using Blackboard discussion forum.	• Blackboard (Bb) Learn mobile app (part of the pre-workshop downloads). • Awareness that the mobile app looks different when accessed on a tablet. • Establishing communication in an online environment to precede future collaboration. • Promoting interaction and collaboration both on- and offline.	• Bb Learn application. • Pre-designed module in Blackboard for discussion.	• Access to Blackboard for workshop interaction(s). • Initiating a discussion in Blackboard.	• 2,3,4,6
Activity 3(a):	• Tablet to watch	• Link to a vlog	• Link in e-handout to	• 2,5

Video Video on social media and mobile devices are used in a classroom.	videos. • Students referred directly to video in the classroom. • Video can be incorporated into presentations with a tablet.	directly related to the activity.	YouTube. • Speeding up downloading, the video was shared in Dropbox..	
Activity 3(b): Short Questionnaire A voting poll with four questions on viewers' opinion about the video (Activity 3(a)). "YES/NO" answer choice.	• Demonstration of formative assessment. • Classroom interaction. • Stimulating discussion.	• Google Form recording responses. • Llink in e-handout. • QR code on e-handout.	• The hyperlink to the Google Form is effective. However, faster access with a QR code was generated as intervention. • Purpose of intervention: to demonstrate that the Google Form (poll questionnaire) could be directly accessed if the enlarged QR code is scanned from the projector screen with a tablet camera and pre-loaded scanner.	• 1 – 6
Activity 3(c): Results of Poll The results of the poll are immediately made available and visible.	• Immediate results from the *cloud*. • Formative assessments more frequently resulting in immediate feedback.	• Google Forms; the immediate results with spreadsheet.	• The same Google response worksheet to be used for every workshop intervention. • Choice of open space not limited to example.	• 1 – 6
Activity 4: Mini e-Portfolio The ideal number of group member: From the CAT heuristic (Figure 2), this activity is designed prompting the group that the portfolio should contain: i. A photo of the group ii. The names of the group members and the subjects taught by each member iii. 5 ideas from	• Interactive collaboration progressing to online interaction. • Natural division of workload to occur – members of the group are automatically assigned to different subtasks. • Capabilities of the tablet not been covered to emerge in an interactive manner. • Self-assessment during workshop.	• Wi-Fi/ Internet connection. • Mobile browser. • Presentation application. • Bb Mobile Learn. • Access to e-mail.	• Tendency: participants to use cloud space for sharing. • Allocated discussion facility in Blackboard was alternatively used for backup.	• 1 – 6

the group on how tablets can be used in the classroom iv. A picture of students using tablets in a learning situation. e-portfolio upload in allocated space.	• Providing opportunity to reflect. • Sharing information. • Transforming information. • Basic cloud computing.			
Activity 5: Presentation Each group presents the mini ePortfolio using a tablet.	• Acquire presentation skills. • Solve problems by compiling presentations. • Tablet connection to data projector. • Stimulate discussion. • Stimulate reflection. • Share ideas on pedagogy. • Peer assessment. • Deliver a polished product.	• Projector connection.	• No iterations were needed for this activity.	• 2 – 6

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Student Preferences for Instructional Methods in an Accounting Curriculum

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Student preferences among instructional methods are largely unexplored across the accounting curriculum. The algorithmic rigor of courses and the societal culture can influence these preferences. This study explored students' preferences of instructional methods for learning in six courses of the accounting curriculum that differ in algorithmic pedagogy. One hundred and thirty-nine accounting students attending a major Sri Lankan university took part in the study. For six courses in the curriculum, the study investigated students' preferences of traditional, interactive, and case-study-based group instructional methods. Students least preferred the traditional instructional method across all courses. Students most preferred the interactive instructional method in high algorithmic courses. In the two low algorithmic courses, students most preferred the case-study-based group instructional method in the management course and the interactive and case-study-based group instructional methods in the business law course. The implications are outlined for an algorithmic pedagogy such as an accounting curriculum.

Change in the future of higher education is influenced by the massive increase in the availability of knowledge, competition for students and government funding, digital technology, mobility of students and academics, and the building of deeper relationships with industry to differentiate teaching programs (EY, 2014). In relation to accounting, the Pathways Commission on Accounting for Higher Education, created by the American Accounting Association and the American Institute of Certified Public Accountants, noted that more needs to be done to engage and retain the strongest possible community of students in the study of accounting (Pathways Commission, 2012, p. 9). Consistent with that vision, this study explored students' preferred instructional methods for learning in an undergraduate accounting degree program across six core courses that demanded different levels of algorithmic rigor. The three instructional methods investigated were traditional, interactive, and case-study-based group.

There were three motivations behind undertaking this study. First, accounting is an algorithmic pedagogy in which the algorithmic rigor varies across courses in the curriculum. Galloway described algorithm metaphorically as "a machine for the motion of parts" (Galloway 2006, p. xi). Wark (2006) and Narayan (2009) approach an algorithm linearly. Wark described it as a finite set of instructions to accomplish some task which transforms an initial starting condition into a recognizable end condition (Wark, 2006, section 31). Narayan described it as a step-by-step breaking down of procedures for a given computational task to facilitate student learning. However, there is little evidence for us to understand which instructional method is most preferred by students for learning courses that have different algorithmic rigor. Second, studies have examined student-preferred instructional methods at a course level rather than across the curriculum (Abeysekera, 2008, 2011). Understanding student-preferred instructional methods across the curriculum enables policymakers to design the delivery of course content in a student-centered way. Third, some have anecdotally concluded that in societies with greater power distance such as Sri Lanka, students most prefer the traditional instructional method. Most Asian countries share the greater power distance as a common societal dimension, and empirical evidence from an Asian context can shed light on the instructional methods commonly preferred by students in accounting curricula in that context.

To explore the stated aim in this study, the next section outlines the relevant literature. Section three presents the theoretical approach and develops hypotheses. The research method and data analysis technique are explained in section four. Section five presents empirical results and discussion. The final section concludes with the implications of findings, limitations of the study, and future research propositions.

Relevant Literature

Contemporary Challenges in Accounting Education

Albrecht and Sack (2000) identified a set of unequal attributes that make accounting students competent. Those ranked most highly by accounting students, practitioners, and academics included written communications, oral communications, analytical and critical thinking skills, decision making, interpersonal skills, teamwork, computer technology, and leadership. Albrecht and Sack urged revision of instructional methods and curriculum in higher education to develop the skill set required in future accountants. A path to facilitating competence in students is to enable them with instructional methods that allow students to build competence through acquiring knowledge, applying knowledge, and gaining insights.

Students' Perceptions on Instructional Methods

The instructional methods help the learning process to connect conceptual knowledge to a meaningful professional practice (Ramsden, 2003, p. 50). Picciano (2002) examined student interaction in an online course in a graduate program in education administration. The author found that student interaction (measured as postings on an online discussion board) positively influenced examination performance in that course (measured as scores on an examination and on a written assignment). Students' perceptions of various aspects of learning have been examined across academic disciplines such as information technology (Smart & Cappel, 2006), foreign language (Stepp-Greany, 2002), and accounting (Zraa, Kavanagh, & Morgan, 2012). Studies have also examined student perceptions of effective instructional methods in different delivery platforms such as distance education (Egan, Welch, Page, & Sebastian, 1992), online education (Potter & Johnston, 2006; Smart & Cappel, 2006), and face-to-face education (Zraa et al., 2012).

Centra and Gaubatz (2005) note that examination scores relating to learning outcomes provide a limited view about student learning. For instance, Abeysekera (2013) reported that students' enhanced critical thinking skills can have an influence on final examination performance in a financial accounting course, but such a relationship speaks for the influence of isolated factors (example, critical thinking skills) on student learning. Centra and Gaubatz (2005) state that examining student perceptions can bring out more aspects about learning not considered by examination-based assessments. These include students' increased interest in interpersonal skills, intrapersonal skills, and critical thinking skills. Analyzing eight academic disciplines—health, business, education, social sciences, fine arts, natural sciences, technology, and humanities—they found that instructional methods contributed differently to student learning. Ferguson (2010) found that differences in instructional method variously influenced learning in different courses. In the English Language and Arts courses students most preferred instructors seeking their viewpoint, asking them questions, and inviting them to answer. In mathematics courses students most preferred the instructors rigorously asking questions to elicit deeper and thorough reasoning from them.

Zraa et al. (2012) examined students' perceptions about feeling empowered in relation to classroom instructional methods with first-year Libyan and Australian students undertaking a business degree program. They assumed the 247 Libyan students in their study were instructed using the traditional method in Libyan tertiary institutions, but separately identified 83 students learning under the traditional method of instruction, and 78 students learning under a collaborative method of instruction in Australian tertiary institutions. They found that students perceived the collaborative instructional method empowered them to make an impact on how learning was conducted in the classroom, to make learning more meaningful, and to be more competent in their learning tasks.

Students' Preference of Instructional Methods

There are various ways to classify instructional methods for learning. Two broad classifications are the teacher-centered instructional approach (traditional instructional method) and the learner-centered instructional approach. The learner-centered instructional approach includes learning through discussion, cooperative learning, and team-based learning. The teacher-centered instructional approach focuses on how students are taught with attention to *what* students learn, while by contrast learner-centered instructional methods are taught with attention to *how* students learn (Kramer et al., 2007).

Rather than classifying instructional methods as teacher-centered and student-centered approaches, literature has also classified instructional methods as traditional, interactive, and case-study-based group, where the teacher-centered instructional approach is traditional, the learner-centered instructional approach is case-study-based group, and the 'hybrid' instructional method is interactive. However, there are salient differences among the three instructional methods investigated. The traditional instructional method offers students little opportunity to engage interactively with the course content (Gray, Bebbington, & McPhail, 1994) and is a teacher-dominated instructional method. The interactive method, on the other hand, allows students to interact with the instructor in two-way communication, asking questions and engaging in discussion. It is a teacher-dominated instructional method, but it facilitates interaction between the students and the instructor. The case-study-based group instructional method divides students into groups and allows them to learn the course content through case studies with the instructor directing and facilitating the learning. In this method there is less emphasis on instructor-centered instruction and more emphasis on students engaging in discussion with their peers. Thus, it is a student-dominated instructional method that facilitates interaction with peers (Apostolou, Hassell, Rebele, & Watson, 2010).

Instructional Methods as a Product of Learning Environment

Students in various academic disciplines study differently (Ramsden & Entwistle, 1981), and this study

examines learning in an accountancy curriculum. Regardless of the academic discipline, good teaching is student-centered (Carpenter & Tait, 2001), but this does not imply that bad teaching is teacher-centered. For instance, Fogarty (2010) argues that education is largely formed by expectations. Students enter into education with strong ideas about what they want and wish to receive rather than with a template an instructor is required to complete. Sangster (2010) pointed out that what needs to be learned in accounting is greatly influenced by external factors such as the accounting profession, but what should be learned can be influenced by the instructional method. The appropriate instructional method can help to increase student learning in a given course. Trigwell, Prosser, and Waterhouse (1999) showed that good teaching involves matching students' learning approaches with appropriate instructional methods.

A study conducted with accounting students at a major Hong Kong university revealed that those students learned as spectators rather than as participants, and it concluded that the learning process is a product of the learning environment (Hwang, Lui, & Tong, 2005, 2008). The learning environment is largely determined by its societal cultural setting, and the authors identified Hong Kong as being representative of Asian societal cultures measured using Hofstede's (1980) societal culture dimensions, characterized by a greater power distance. The greater power distance between the instructor and students diminished student participation in the learning process and was considered more conducive to passive, rather than active, learning. The authors also noted that the society's cultural setting might have caused an inherent resistance to the introduction of alternative instructional methods by the instructors, and that the instructors' adopting the traditional instructional method was consistent with Hong Kong's societal cultural setting.

This study undertook an experimental investigation into students' preferred instructional methods (traditional, interactive, and case-study based group) in six algorithmically different courses in the accounting curriculum of a large Sri Lankan university. Since accounting curricula comprise courses that differ in algorithmic rigor, such investigation could provide valuable information regarding students' preferences of instructional method for courses across an accounting curriculum.

Algorithmic Pedagogy and Likely Student Preferences of Instructional Methods

Rules of academic discourse differ between courses, and students explore various ways to understand these discourses (Hull & Rose, 1990). Thus, instructors need to understand the ways in which learners learn the rules of academic discourse in various courses in academic disciplines (Olivier-Shaw, 1995). Several studies examining single courses, or single topics, in Western tertiary institutions have created a "halo effect" assumption that student-to-student interaction is the most preferred to achieve best examination performance outcomes, equating those outcomes to student learning (Hwang et al., 2005, 2008; Johnson, 1981; Kerr & Murthy, 1994; Potter & Johnston, 2006).

Umapathy (1984) noted that courses in the accounting curriculum have wide variations in algorithmic rigor. Umapathy identified six attributes that make course content highly algorithmic: (1) the course content has procedural aspects; (2) the problems examined therein can be broken down into several components as procedures or decisions; (3) the concepts or theories to be learned can be generated by solving problems; (4) there is one correct solution to each problem; (5) the learning process can be standardized across all students and instructors; and (6) the material to be learned is high in the importance of accuracy and low in the importance of subjective factors.

Discussing algorithms in two courses in the accounting curriculum, Jackling (2005) explained that the focus of financial accounting courses is on following highly structured procedures for recording and reporting financial results of operations of organizations. The application of high algorithmic rigor in learning financial accounting enables students to logically understand the tasks involved, from classifying financial transactions to preparing financial data in organizations that must meet legislative and accounting regulatory requirements. On the other hand, management accounting courses have less structured procedures, do not necessarily follow a sequential process, and defy that high level of algorithmic rigor in learning.

Simon (1977) pointed out that every solution construction, whether it is structured, semi-structured, or unstructured, relies on algorithms. Using this premise, students learn to organize and rearrange numerical and/or non-numerical symbols. In solving problems, students can organize symbol-manipulation processes into orderly, complex sequences to respond to the task environment. The algorithms thus are the basic elements of the problem-solving structure: whether the problems are structured, semi-structured, or unstructured, they are commonly solved by developing algorithms (Simon, 1977).

Algorithmic pedagogy relies on two aspects: course learning content in terms of algorithmic rigor, and the use of appropriate instructional method. The instructional methods could differ in relation to the level and robustness of algorithm development in

learning demanded by students. Arguably, the interactive instructional method would offer the best pathway to develop algorithms in learning among students with the help of an instructor who has demonstrated competence in the application of algorithms. Using the interactive instructional method, instructors have ample time to design classroom activities with their students, as well as to overcome any misunderstandings while the concepts are still fresh in students' minds (Ongeri, 2009).

The Pathways Commission identified several challenges for the future of higher education in accounting, and using appropriate instructional methods can facilitate increased student learning and help meet those challenges. Previous studies have documented that instructional methods are a product of the learning environment (Abeysekera, 2008, 2011; Hwang et al., 2005, 2008). Evidence from societal cultures outside the Western setting is scarce, and so far this has narrowed our understanding about appropriate instructional methods. The fact that accounting involves algorithmic pedagogy has received less than its deserved attention. In this pedagogy, courses can have differing algorithmic rigor, and the algorithmic rigor can influence student instructional method preferences. If education is to be student centered, students should be consulted for their preferred instructional methods.

Hypothesis Development

Algorithms in Accounting

In consultation with the course coordinators and the head of the school of accounting, each of the six algorithmic pedagogical attributes suggested by Umapathy (1984) was evaluated for high, medium, or low rigor in each of the six courses (Table 1). Based on the analysis as shown in Table 1, financial accounting and business statistics are high on five attributes, finance is high on four attributes, management accounting is high on three attributes, and business law and management are high on one attribute only.

Assigning ordinal scale values as 3 for high, 2 for medium, and 1 for low, the financial accounting and business statistics courses received the highest algorithmic score of 17 points each. The finance course received 16 points, and the management accounting course received 15 points. The business law course received 10 points, and the management course received eight points. The median score was 15.5, and the management accounting course was thus closest to the median value. In common with the courses above median value, the management accounting course required students to learn the procedural aspects with a high degree of precision in solutions. Therefore, financial accounting, finance, business statistics, and management accounting courses were classified as high algorithmic rigor. Business law and management courses were classified as low algorithmic rigor.

Traditional lecturing involves no interaction with the instructor, and in the current study it is expected to be the least favored by students in courses with an algorithmic pedagogy because they must construct algorithms without any assistance. In courses where procedural steps are low, multiple solutions to a given problem are the norm, and inexact answers are tolerated, it is likely students will be ambivalent about whether knowledge is to be constructed by interacting with the instructor or with their peers.

Using Hofstede's (1980) cultural dimensions as a basis, Sri Lanka is a greater power distance society. The power distance index suggested for Sri Lanka is 80, which is much higher than the comparable index scores for countries such as Australia (36), the United States (40), and the United Kingdom (35) (Hofstede Centre, 2014). Given the societal greater power distance in Sri Lanka, it is likely that students would prefer to rely on the instructor in constructing algorithms. The power distance dimension also informs that less powerful individuals (for example, students) expect and accept the authority of the more powerful individuals (for example, instructors) in a given societal setting (for example, a tertiary educational setting). Thus, students would tend to revere the instructor as having a greater knowledge base to learn procedural information and arrive at exact answers. This study expects that, while culturally revering the instructor as having valuable knowledge to impart, students would choose the interactive teaching method as more useful than the traditional lecturing method for these courses. Opportunity for interaction with the instructor increases the transfer of knowledge. This study, therefore, expects that students would most prefer the interactive instructional method for courses. The following two hypotheses were stated:

- H1: Students most prefer the interactive instructional method to learn high algorithmic courses.
- H2: Students most prefer the interactive and case-study-based group instructional methods to learn low algorithmic courses.

Control Variables

Several studies have confirmed the relation between the overall GPA (grade-point average) and examination scores (Harnett, Romcke, & Yap, 2004; Tickell & Smyrnios, 2005), but not in relation to the students' instructional method preference. Several cross-sectional studies (Booth, Luckett, & Mladenovic, 1999; de Lange & Mavondo, 2004; Duff, 1999) and

Table 1
Attributes for Algorithmic Pedagogy for Courses in the Study

Attribute	Financial Accounting	Management Accounting	Finance	Management	Business Statistics	Business Law
Importance of procedural aspects	High	Medium	Medium	Low	High	Low
Breaking down a problem into several procedures	High	High	High	Low	High	Medium
Generating concepts through problem-solving	High	High	High	High	High	High
One solution to each problem	Medium	Medium	Medium	Low	Medium	Low
Learning process standardization	High	High	High	Low	High	Medium
Importance of accuracy factors	High	Medium	High	Low	High	Low

Note. Criteria suggested by Umapathy (1984)

longitudinal studies (Ballantine, Duff, & Larres, 2008; Hall, Ramsay, & Raven, 2004) have examined gender difference in relation to student learning outcomes and obtained mixed results. The current study included variables from the literature that may determine students' perceptions, for additional analysis: student age, work status (student in work-integrated learning or not), and enrollment status (full-time or part-time) to determine whether the students' preferences for instructional methods are statistically different above and beyond the determinants of these control variables. Table 2 outlines the proxy and measurement of variables.

Research Method

Experimental Design

The courses examined were from the third year of the accounting program. In planning to conduct the research, discussions held with the head of the school of accounting and several academic staff of the accounting department at the university confirmed that third- and fourth-year undergraduate students had experienced the three instructional methods and undertaken courses examined in this study. All courses had a final examination. Based on the course content, and guided by prior studies, this study selected courses in such a way that they differed in algorithmic pedagogy (see Table 2).

Task

Research on learning processes focuses on identifying ways of supporting learners. Studies have examined cognitive, affective, and behavior practices of learners in specific learning contexts. For the current study, the researcher constructed a questioning format for participants and pilot-tested it for clarity and appropriateness with a sample comprised of academic staff and recent graduates. It obtained responses from students for each of the three (i.e., traditional, interactive, and case-study-based group) instructional methods on a five-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). The responses for each course constituted one experiment, and there were thus six experiments for six courses investigated (Appendix).

Students were first given a cover sheet outlining the purpose of the study. It stated: "For the purpose of this study, traditional learning occurs when the teacher teaches the course content with no interaction with students in a two-hour lecture. Interactive learning occurs when the teacher teaches the course content with more interaction between students and the teacher in a two-hour lecture. Case-study-based group learning occurs when the teacher teaches the course content with minimal interaction with students, but students interact substantially with their peers and learn through case-study material in small groups of three to four in a two-hour lecture."

Students were informed that the statements about instructional methods were inquiring about six courses from their studies. In preparing participants for the experiments, the administrator of the experiments asked participants to assume that every other factor was the same for all three instructional methods across all courses. To avoid the assessment criteria influencing

Table 2
Variable Proxy and Measurement

Variable	Proxy	Measurement	Data source
Dependent			
Courses	Financial accounting (FA), management accounting (MA), finance (F), management (M), business studies (BS), business law (BL)	Five-point response score of 1 (strongly disagree) to 5 (strongly agree)	Questionnaire
Predictor			
Instructional method	Traditional method (TM), interactive method (IM), and case-study based group (GM)	TL=1, TM=2, and GM=3	Pre-defined from literature
Control			
Study year	Student year of study	Third year=0, fourth year=1	Questionnaire
Student cohort	The year in which study was conducted	2006=0, 2008=1	Questionnaire
GPA	Student grade-point average	Between 0 and 4	Questionnaire
Gender	Student gender	Female=0, male=1	Questionnaire
Work status	Student in work-integrated learning (WIL) program or otherwise	Non WIL students =0, WIL students=1	Questionnaire
Enrollment status	Student enrolled as full-time or otherwise	Part-time=0, full-time=1	Questionnaire

the responses, students were told that all courses would have a final examination only. The administrator of the experiments answered any other questions participants had before commencing the experiments, which were provided to the participants as seven separate sheets that followed the cover sheet.

Students were asked to record their preferences in relation to each of the three instructional methods for the course in question. Below these questions, a space was provided for any comments the participants might wish to write. Six separate sheets were prepared and given to students, and each sheet solicited students' preferences on instructional methods relating to a different course. Another sheet required them to record demographic information. Students were given these seven sheets (six for the courses and one demographic sheet) in a random order, to be completed in that sequence. As per the ethics agreement, the students were given written assurance that their participation in the study was voluntary and that their anonymity would be maintained. The research was conducted in 2006. The experiments were conducted on the same day, prior to an evening lecture for both third- and fourth-year students.

Students as Participants

One hundred and thirty-nine students participated; 54 (39%) students were male, and 85 (61%) were female. The overall GPA of the students was 3.65 (*SD* = 0.79). The average age of the students was 23.7 (*SD* = 1.7). Ninety (65%) were fourth-year students, and 49 (35%) were third-year students. Ninety-one students were employed (65%), and 48 students were not (35%). Sixty-two students (45%) were enrolled full-time, and 77 (55%) were enrolled part-time.

Data Analysis Technique

This study meets normality assumptions of response scores of preferred instructional methods, and therefore the results are interpreted using a 95% confidence interval (Glass, Peckham, & Sanders 1972; Hsu & Feldt., 1969). Response scores were obtained (SA=5, A=4, N=3, D=2, SD=1) from experiments relating to students' preferences for the three instructional methods for each course, and they were analyzed using multivariate analysis of variance (MANOVA) to verify whether students' preferences relating to the three instructional

methods were statistically different across the six courses in the curriculum.

Results

Table 3 reports the strength of the association (Partial η2) between instructional methods and each given course in the multivariate statistics. All multivariate statistics associated with the instructional method were statistically significant at $p<0.001$, and not significant for control variables. The effect size between instructional methods and each course is large.

This study used the MANOVA procedure to test for the differences in means among the three instructional methods. MANOVA works well when the dependent variables are moderately correlated (correlation matrix is not reported here). The study tested for the assumptions made in MANOVA about dependent variables. A check on linearity of relationships showed the skewness results were within the acceptable range. The scatterplot matrix visually confirmed the absence of outliers. Although Box test is disregarded when sample size is equal, the sample size was indicative of the multivariate normality. Because the Levine's test of homogeneity of variances was significant, the Pillai's trace statistics were used as the most robust statistic to infer statistical significance at the one percent level (Tabachick & Field, 2001, p. 80). The MANOVA results showed that the Pillai's trace (P) (F value=4.14) was significant at one percent of the overall model. The MANOVA results also showed that the Pillai's trace (P) (F value=22.14) was significant at the one percent level of the instructional method. The control variables were not significant.

Results for Hypothesis One: High Algorithmic Courses and Instructional Method Preferences

Since MANOVA does not show which instructional method is most preferred by students for each given course, this study conducted a post-hoc MANOVA test to identify which instructional methods are statistically different at the one percent significance level by contrasting two instructional methods at a given time, and summarized the comparison (see furthest right column in Table 3, the inequality column).

The negative significant sign of TM versus IM indicates that students preferred the interactive instructional method over the traditional instructional method in all courses. The positive significant sign of IM versus GM in financial accounting (0.794), business statistics (0.873), finance (0.541), and management accounting (0.462) indicates that students preferred the interactive instructional method over the case-study-based group instructional method. This satisfies H1 where students most preferred the interactive instructional method to learn high algorithmic courses.

Results for Hypothesis Two: Low Algorithmic Courses and Instructional Method Preferences

Results from post-hoc MANOVA test to identify which instructional methods are statistically different at one percent significance level show that the business law course satisfies H2 where students preferred the interactive and case-study-based group instructional methods. However, results from the management course only partially satisfy H2 because students most preferred the case-study-based instructional method over the interactive instructional method.

Although the IM versus GM coefficient was positive (0.239), it was not significant in the business law course, where students showed no clear preference between the interactive instructional method and the case-study-based group instructional method. The IM versus GM coefficient was negative and significant in the management course (-0.351), indicating that students most preferred the case-study-based group instructional method for that course. Therefore, H2 is partially supported.

Although gender, GPA, study year, working status, and enrolment status are variables found to statistically influence examination performance, they had no statistical influence in student preferences of instructional methods.

Conclusions

This study found that students preferred to obtain conceptual and application knowledge by interacting with the instructor (interactive instructional method) rather than merely receiving this knowledge from the instructor (traditional instructional method) in high algorithmic courses. Students intentionally chose the freedom to rely on the instructor to impart procedural steps to arrive at single solutions with precision.

The findings of this study are pertinent for three reasons. First, the study was conducted at a Sri Lankan university and thus adds to the broader understanding of students' preferred instructional methods across different courses in an accounting curriculum in a greater power-distance society and a large class setting. In a greater power-distance society such as Sri Lanka, students are likely to revere instructors more than in a lower-power-distance society. Second, the study found that the students preferred the interactive instructional method for the courses with high algorithmic rigor. It is likely that students most prefer to model instructors' knowledge, as well as that instructors or peers becoming involved in resolving issues serves to facilitate students' greater understanding of the content

Table 3
Univariate Statistics Associated with MANOVA for the Instructional Method (N = 417)

Instructional method	TM		IM		GM				
Dependent variable	Mean	Std. error	Mean	Std. error	Mean	Std. error	F (df, n-2)	Partial η2	Inequality
Financial accounting	2.80	1.30	4.32	0.80	3.53	1.28	15.40	0.23	IM>GM>TIM
Business statistics	2.85	1.40	4.25	0.98	3.78	1.13	10.62	0.17	IM>GM>TIM
Finance	2.86	1.41	4.05	1.02	3.53	1.26	8.09	0.14	IM>GM>TIM
Management accounting	2.75	1.31	4.08	1.10	4.45	0.85	12.52	0.20	IM>GM>TIM
Business law	2.90	1.53	4.27	0.93	3.40	1.31	6.00	0.11	IM, GM>TIM
Management	3.15	1.41	4.13	1.13	3.88	1.18	23.20	0.31	GM>IM>TIM

of these courses. Third, students least preferred the traditional instructional method regardless of the course algorithmic rigor due to the least involvement of instructors in resolving learning issues relating to course content. The findings of this study can have implications for other curricula such as engineering and finance that contain courses with differing algorithmic rigor. Future research can engage in such inquiry.

The findings should, however, be considered in the context of several limitations encountered. First, this study was conducted at a single tertiary institution at one time interval, and generalizing findings to other tertiary institutions requires future empirical validation. The experimental setting makes findings strong in interval validity, but not in external validity. For instance, the experimental setting manipulated the instructional methods separately, but in practice these instructional methods can be used concurrently. Second, it examined six courses in the accounting curriculum, and expanding the number of courses in future experiments would assist in further broadening findings across a wider set of courses in the curriculum. Third, in a small class setting, cooperative learning as an instructional method can become appropriate because it provides an opportunity for students to exercise their metacognitive learning, which is essential to empower reasoning skills (Johnson, 1981). The purpose of this study was to investigate the extent to which students prefer instructional methods rather than why they prefer them, and a future study can investigate the reasons behind such selection. For instance, in one learning context, students may compete with each other for interactive instruction to obtain better praise and grades from the instructor. In another learning context, students may feel positively interdependent to help their group members to enhance learning. A future study could also investigate whether these student preferences for instructional method translate into planned educational outcomes (such as exam scores) and students' themed learning (such as critical thinking skills). The outcomes from such implementation could then serve as feedback, leading to further refinements of the students' preferred instructional methods.

Despite these limitations, the findings are consistent with those of the Abeysekera (2008, 2011) and Hwang et al. (2005, 2008) studies that reported active instructional methods to be the students' preferred choice, although there existed the possibility that students might prefer the traditional instructional method because of the societal cultural setting (Hwang et al., 2005, 2008). Results show that, to the contrary, these students most prefer the interactive instructional method in learning courses that have high algorithmic rigor. The cultural setting with greater power distance was found to be conducive to the interactive instructional method, with the instructor becoming the revered expert in facilitating algorithmic rigor for the students.

References

Abeysekera, I. (2008). Preferred learning methods: A comparison between international and domestic accounting students. *Accounting Education: An International Journal*, *17*(2), 187–198.

Abeysekera, I. (2011). Learning financial accounting in a tertiary institution of a developing country: An investigation into instructional methods. *Journal of University Teaching and Learning Practice, 18*(1), 1–15.

Abeysekera, I. (2013). Further evidence of critical thinking skills in advanced financial accounting. *Academy of Taiwan Business Management Review*, *9*(2), 97–105.

Albrecht, W. S., & Sack, R. J. (2000). *Accounting education: Charting the course through a perilous future*. Sarasota, FL: The American Accounting Association.

Apostolou, B., Hassell, J. M., Rebele, J. E., & Watson, S. F. (2010). Accounting education literature review (2006–2009). *Journal of Accounting Education, 28*(3–4), 145–197.

Ballantine, J. A., Duff, A., & Larres, P. M. (2008). Accounting and business students' approaches to learning: A longitudinal study. *Journal of Accounting Education, 26*(4), 188–201.

Booth, P., Luckett, P., & Mladenovic, R. (1999). The quality of learning in accounting education: The impact of approaches to learning on academic performance. *Accounting Education: An International Journal, 8*(4), 277–300.

Carpenter, B., & Tait, G. (2001). The rhetoric and reality of good teaching: A case study across three faculties at the Queensland University of Technology. *Higher Education, 42*(2)*,* 191–203.

Centra, J. A., & Gaubatz, N. B. (2005). *Student perception of learning and instructional effectiveness in college courses. A validity study of SIR II.* Retrieved from https://www.ets.org/sir_ii/about/research

de Lange, P., & Mavondo, F. (2004). Gender and motivational differences in approaches to learning by a cohort of open learning students. *Accounting Education: An International Journal, 13*(4), 431–448.

Duff, A. (1999). Access policy and approaches to learning. *Accounting Education: An International Journal, 8*(2), 99–110.

Egan, M. W., Welch, M., Page, B., & Sebastian, J. (1992). Learners' perceptions of instructional delivery systems: Conventional and television. *The American Journal of Distance Education,* 6(2), 47–55.

EY. (2014). Change will be driven by five trends. University of the future. Retrieved from http://www.ey.com/AU/en/Industries/Government---Public-Sector/UOF_Change-will-be-driven-by-five-trends

Ferguson, R. F. (2010, October). *Student perceptions of teaching effectiveness* (Discussion Brief). National Centre for Teaching Effectiveness and the Achievement Gap Initiative, Harvard University. Retrieved December 19, 2014 from cepr.harvard.edu/ncte/news/Using_Student_Perceptions_Ferguson.pdf

Fogarty, T. J. (2010). Revitalizing accounting education: A highly applied liberal arts approach. *Accounting Education: An International Journal, 19*(4), 403–419.

Galloway, A. (2006). *Gaming: Essays on algorithmic culture.* Minnesota, Minneapolis: University of Minnesota Press.

Glass, G. V., Peckham, P. D., & Sanders, J. R. (1972). Consequences of failure to meet assumptions underlying the fixed effects analyses of variance and covariance. *Review of Educational Research, 42*(3), 237–288.

Gray, R., Bebbington, J., & McPhail, K. (1994). Teaching ethics in accounting and the ethics of accounting teaching: Educating for immorality and a possible case for social and environmental accounting education. *Accounting Education: An International Journal, 3*(1), 51–75.

Hall, M., Ramsay, A., & Raven, J. (2004). Changing the learning environment to promote deep learning approaches in first-year accounting students. *Accounting Education: An International Journal, 13*(4), 489–506.

Harnett, N., Romcke, J., & Yap, C. (2004). Student performance in tertiary-level accounting: An international student focus. *Accounting and Finance, 44*(2), 163–185.

Hofstede, G. (1980). *Culture's consequences: International differences in work-related value.* Beverly Hills, CA: Sage.

Hofstede Centre. (2014). The Hofstede Centre. Sri Lanka. Retrieved from http://geert-hofstede.com/sri_lanka.html

Hsu, T. C., & Feldt, L. S. (1969). The effect of limitations on the number of criterion score values on the significance level of the F-test. *American Educational Research Journa*l, *6*(4), 515–527.

Hull, G., & Rose, M. (1990). Towards a social-cognitive understanding of problematic reading and writing. In A. Lunsford et al. (Eds.), *The rights to literacy* (pp. 234–244). New York, NY: The Modern Language Association of America.

Hwang, N. C. R., Lui, G., & Tong, M. Y. J. W. (2005). An empirical test of cooperative learning in a passive learning environment. *Issues in Accounting Education, 20*(2), 151–165.

Hwang, N. C. R., Lui, G., & Tong, M. Y. J. W. (2008). Cooperative learning in a passive learning environment: A replication and extension. *Issues in Accounting Education, 23*(1), 67–75.

Jackling, B. (2005). Analysis of the learning context, perceptions of the learning environment and approaches to learning accounting: A longitudinal study. *Accounting and Finance, 45*(4), 597–612.

Johnson, D. W. (1981). Student-student interaction: The neglected variable in education. *Educational Researcher, 10*(1), 5–10.

Kerr, D. S., & Murthy, U. S. (1994). Group decision support systems and cooperative learning in auditing: An experimental investigation, *Journal of Information Systems, 8*(2), 85–96.

Kramer, P., Ideishi, R. I., Kearney, P. J., Cohen, M. E., Ames, J. O., Shea, G. B., Schemm, R., . . . Blumberg, P. (2007). Achieving curricular themes through learner-centered teaching. *Occupational Therapy in Health Care, 21*(1/2), 185–198.

Narayan, A. (2009). Rote and algorithmic techniques in primary level mathematics teaching in the light of Gagne's hierarchy. In Proceeding of *The 3rd International Conference to Review Research on Science, Technology, and Mathematics Education*. Cambridge, MA: Academic Press.

Olivier-Shaw, A. (1995). A student's perception of academic writing tasks. *English Academy Review: Southern African Journal of English Studies, 12*(1), 47–57.

Ongeri, J. D. (2009). Learner-centered teaching: One of the alternative ways of teaching and learning in economics. *The Business Review, Cambridge*, *14*(1), 48–56.

Pathways Commission. (2012). Charting a national strategy for the next generation of accountants. Retrieved from http://www.pathwayscommission .org

Picciano, A. G. (2002). Beyond student perceptions: Issues of interaction, presence, and performance in an online course. *The Journal of Asynchronous Learning Networks (JALN), 6*(1), 21–40.

Potter, B. N., & Johnston, C. G. (2006). The effect of on-line learning systems on student learning outcomes in education. *Journal of Accounting Education, 24*(1), 16–34.

Ramsden, P. (2003). *Learning to teach in higher education.* London, England: Routledge.

Ramsden, P., & Entwistle, N. J. (1981). Effects of academic departments on students' approach to learning. *British Journal of Educational Psychology, 51*(3)*,* 368–383.

Sangster, A. (2010). Liberalising the accounting curriculum. [Editorial]. *Accounting Education: An International Journal, 19*(4), 323–327.

Simon, H. A. (1977). *The New science of Management Decision*, Edgewood Cliffs, NJ: Prentice-Hall.

Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education, 5*(1)*,* 200–219.

Stepp-Greany, J. (2002). Student perceptions on language learning in a technological environment: Implications for the new millennium. *Language Learning & Technology, 6(1)*, 165–180.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*. Boston, MA: Pearson Education.

Tickell, G., & Smyrnios, K. X. (2005). Predictors of tertiary accounting students' academic performance: A comparison of year-12-to-university students with TAFE-to-university students. *Journal of Higher Education Policy and Management, 27*(2), 239–259.

Trigwell, K., Prosser, M., & Waterhouse, F. (1999). Relations between teachers' approaches to teaching and students' approaches to learning. *Higher Education, 37*(1)*,* 57–70.

Umapathy, S. (1984). Algorithm-based accounting education: Opportunities and risks. *Issues in Accounting Education, 2*, 136–143.

Wark, M. (2006). *GAM3R 7H3ORY*, Version 1.1. Retrieved from http://www.futureofthebook.org/gamertheory/

Zraa, W., Kavanagh, M., & Morgan, M. (2012, July). A comparison study of Libyan and Australian accounting students in their perceptions of empowerment. *Accounting and Finance Association of Australia and New Zealand*, Melbourne. Retrieved from http://eprints.usq.edu.au/21540/2/Zraa_Kavanagh_ Morgan_AFAANZ2012_PV.pdf

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Examining Intercultural Competency Through Social Exchange Theory

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Intercultural competency (ICC) has been an extensively researched area within the past decade, given the broad consensus that this trait constitutes one of the key competencies of the 21st century manager. However, somewhat under-explored are aspects including the implications and effects that pedagogies such as blended learning have on the inculcation of ICC traits, specifically within the context of multicultural, multi-ethnic university level student groups in Australia, within which this research has been conducted. Drawing on social psychology, this exploratory study examines perceptual data on blended learning experiences within a cross-cultural higher education setting. Results suggest that intercultural competency is best learned through social exchanges, such as face-to-face rather than blended learning. Our findings provide support for the importance of context, which is significantly related to cross-cultural studies and curriculum development and design.

The debate on whether online or face-to-face is the better of the two learning and teaching modes has been ongoing and long drawn out (Meyer, 2007; Redpath, 2012). Gaining ground, in the meantime, is the third option, blended learning, with its purported ability to combine the "best of both worlds" (Dziuban, Hartman, & Moskal, 2004, p. 3), harnessing the efficacies of the Internet and communication technologies (ICT). Blended learning is described as a thoughtful integration of classroom face-to-face learning experiences with online learning experiences (Garrison & Kanuka, 2004). The literature highlighting the proliferation and benefits of the blended learning mode of delivery is rich (Bailey & Morais, 2004; Getty & Getty, 2003; Goodyear & Ellis, 2008; McDonnell, 2000). This trend towards the increased adoption of blended learning holds true in the context of Australia, the country within which this research was conducted, given the country's reputation for being an early adopter of technology (Barwick, 2011). However, while it appears that the efficacies of blended learning cater to several needs of present day university students (Dziuban et al., 2004; Graham, 2006), such as the enhanced need for flexibility and asynchronous learning, to name a few, one critical element remains underexplored, and that is the development of intercultural competency (ICC) traits.

Described increasingly as the key competency of the 21st century manager, ICC is broadly defined by scholars as being the ability of individuals to change their knowledge, attitudes and behavior, in terms of their openness and flexibility to other cultures, to survive in today's modern globalised society (Azriel, Erthal, & Starr, 2005; Deardorff, 2004, 2006, 2009; Freeman, 1995; Leask, 2009). Building on the case for ICC further are several others who associate the sustainable, long-term success of firms in a global economy with the need for adaptable, sensitive employees responsive to global trends and with the ability to communicate across cultures (Kittler, Rygl, & Mackinnon, 2011; Wong, Etchells, Kuper, Levinson, & Shojania, 2010).

Several scholars maintain that ICC traits are best taught and learned at universities and educational institutions, especially given the growing diversity existing within such establishments. Interestingly, and consistent with this line of reasoning, are the initiatives of the Association to Advance Collegiate Schools of Business (AACSB) which identified multicultural and diversity understanding as important knowledge in undergraduate business programs, with accredited schools being required to support the concept of diversity and to show that their curricula prepare students for careers in global contexts. The AACSB directive required business schools to "prepare their students to work in an environment of strong global economic forces, wide differences in organizational and cultural values, and growing cultural diversity among employees and customers. The personal competencies responding to these requirements include flexibility, resourcefulness, tolerance for ambiguity, and vision, as well as cultural self-awareness, cultural consciousness, and multicultural leadership (Egan & Bendick, 2008; Kulik & Roberson, 2008).

Ironically, while the foregoing supports the view that competing and survival in a globalized environment demands that international managers be interculturally sensitized, research (Leask, 2009) indicates that, whereas Australian universities registered a significant increase in their international student intake in the past decade, the same period failed to witness a corresponding increase in engagement between domestic and overseas students. A question that perhaps flows logically from this situation is whether this lack of engagement equals to a lack of ICC awareness and development within Australian universities. Some studies which address this potential issue (Montgomery, 2009; Summers & Volet, 2008) attempt to link teachers' pedagogic interventions, such as the use of group work in

culturally diverse cohorts, to students' enhanced cross-cultural capability and their sense of belonging.

This latter aspect resonates well with social exchange theory (SET), which postulates that human behavior, or social interaction, is an exchange, with exchange defined as social interaction characterized by aspects including reciprocal stimuli and enduring long-term social relations (Buchan, Croson, & Dawes, 2002; Zafirovski, 2005). A study by Yamazaki and Kayes (2004) revealed that 73 intercultural competencies are required for successful international managers. Some significant skills and abilities identified in their study included interpersonal skills, ability to use humor, interaction management, relationship building, and cultural empathy. Could the foregoing, therefore, when extended to the context of a highly international and multi-cultural student group with a strong digital divide (Prensky, 2001), be construed to mean that more face-to-face interactions, and hence reduced BL, is the way forward to allow for more social interaction and more reciprocal stimuli and, therefore, more ICC learning? In this article we attempt to address this through our research question: How do face-to-face and blended learning mode of learning compare in a highly cross-cultural setting where the main objective is to develop skills in ICC? Following from this research question, perceptual data was extracted from within an international, multi-cultural, post-graduate student cohort in an Australian university. Findings are supported with the key tenets of SET, an approach not particularly evident in the extant literature comparing the efficacy of face-to-face and blended learning, thereby giving this study its element of uniqueness.

We initially touch upon the broader elements of blended learning and face-to-face modes of delivery, followed by the increasing trend towards adoption of blended learning by the higher education sector the world over, and finally the growing importance of ICC and the critical need for inculcating these traits within student communities. Following this, we develop our argument that face-to-face is a more effective method than blended learning to develop ICC within cross-cultural student groups while simultaneously discussing and integrating elements of SET to inform our arguments.

The Case for Blended Learning

The extant literature is rife with statistics detailing the proliferation of technology enhanced non-traditional instructional methods in the higher education landscape, often referred to as technology-mediated learning (TML). Characterizing these institutions are ongoing investments aimed at enhancing integration of technology components into courses ranging from information sciences and technology and communications to chemistry, nursing, and tourism and hospitality management (Alavi & Gallupe, 2003; Bailey & Morais, 2004; Brower, 2003; Christianson, Tiene, & Luft, 2002; Dziuban et al. 2004; Getty & Getty, 2003; Ladyshewsky & Flavell, 2012; Meyer, 2007; McDonnell, 2000; Paulisse & Polik, 1999; Sigala & Christou, 2003; Simkins, Coldwell, Close, & Morgan, 2009,). Although some studies, such as those of Bailey and Morais (2004) and Dziuban et al. (2004), appear to be American-centric, the significance of their research is arguably applicable to other developed nations, such as Australia, given the proliferation of computer mediated learning in recent years.

The blended learning delivery option, according to its proponents (Bailey & Morais, 2004; Dziuban et al., 2004; De George-Walker & Keeffe, 2010), allows for retention of the face-to-face element and the effectiveness and socialization opportunities of the classroom while combining with the technologically enhanced learning environment, thus affording the best of both worlds. In order to ensure quality of learning environments, it is important to consider the design of, and students' engagement in, the learning environment (Duffy & Kirkley, 2004). Learning environments which are ineffectively designed could potentially lead to unsuccessful or unsatisfactory educational experiences. To address this concern, the community of inquiry (CoI) framework, developed by Garrison, Anderson, and Archer (2000), has been widely accepted and adopted (Arbaugh et al., 2008; Garrison & Arbaugh, 2007). The CoI framework, with its emphasis on critical thinking and collaboration, provides a well-structured model and a set of guidelines to create effective learning communities in online and blended learning environments (Garrison & Anderson, 2003; Garrison & Vaughan, 2008).

Face-to-Face and ICC

An interesting parallel development is the growing organizational demand for cross-culturally capable employees who work within increasingly multi-cultural workforces (Goltz, Hiatapelto, Reinsch, & Tyrell, 2008; Pillay & James, 2013) to be equipped with skills including problem solving and advanced interpersonal skills (Avery & Thomas, 2004; Yamazaki & Kayes, 2004). Specifically, within the Australian context, the recent White Paper released by its government (Australian Government, 2012) clearly details the need for the nation to broaden and deepen its understanding of Asian cultures and languages as a route to becoming more Asia capable and literate. Some scholars argue that an effective solution to meeting ICC relevant demands is through universities training students prior to their entering the workforce (Freeman, 1995). Supporting such thinking are others who maintain that

the increasing cultural, socio-economic and age-related diversity seen within universities (resulting from a greater demand for education) make them a valuable resource and an ideal training ground for imparting intercultural competence and allied skills within a low-risk environment (Azriel et al., 2005; Leask, 2009).

However, flowing from the aforesaid is a somewhat interesting and what appears to be an ironic scenario wherein universities on the one hand are being pressured to mold students into interculturally competent employees of the future, while on the other hand they are being required to do so with reduced face-to-face contact given the exponential increase in the adoption of online, technology-enhanced delivery modes. It is possible to reason that this sustained push towards the adoption of blended learning reflects a *one size fits all* mentality that somewhat disregards the fact that individuals from different cultural backgrounds have different learning style preferences (Holtbrugge & Mohr, 2010; Kayes, 2002; Kolb, 1984; Kolb & Kolb, 2005; Yamazaki & Kayes, 2004). This potentially creates a contentious situation with tensions and, arguably, a trade-off, in that a reduction in face-to-face delivery equates with diminished ICC development of students. Implicit within this contentious scenario, and observable in its violation, is the assertion of Dewey (1916) that there is an inextricable link between what is taught and the method of teaching it. While extending this premise further in the following sections, we argue that the case for maintaining the principles of SET and developing students' ICC traits, and harnessing the benefits of the diversity available within university student communities, is as strong as is the case for enhanced face-to-face contact to facilitate the nurturing of these traits.

Several scholars argue that the benefits that accrue from effectively tapping into the diversity within today's higher education settings cannot be overemphasized (Bledsoe, Oatsvall, & Condon, 2010; Garcia et al., 2001; Milem, Chang, & Antonio, 2005). While claiming that institutions that deliver programs with a strong diversity benefit students, including enhanced cognitive and critical thinking skills, such scholars also maintain that students of such environments are more likely to recognize inequality and act on resolving it, and they are better prepared for life in an increasingly complex and diverse society and are more open to living in racially diverse neighborhoods after graduation. Others (Briguglio, 2006a; Briguglio, 2006b) maintain that time allocated within classrooms to aspects such as icebreaking, sharing expertise, and social interaction creates a climate of interaction which results in valuing cross-cultural skills and knowledge.

On the other hand, however, are forceful arguments (Anderson, 2008; Fincher, Carter, Tombesi, Shaw, & Martel, 2009) that merely being part of a common campus or class does not make up for successful peer interaction. Perfectly mirroring this is the higher education tapestry in Australia, rich in the cultural diversity of its student population, with a dramatic increase in the absolute number of international students studying in its universities in the last decade; however, there has been no corresponding increase in terms of the interaction levels between local (Australian) and overseas students over the same period (Leask, 2009). Arguably, the key to the dilemma of optimizing the benefits of interaction lies in this being "planned and incorporated" within curriculum design, according to a research project examining the benefits and hindrances to interaction among students from diverse cultural and linguistic backgrounds which was conducted in Australia between 2008 and 2010 (Arkoudis et al., 2010). Interestingly, this research found that while the potential obstacles on the teaching side included "limited time" available to foster interaction, a key barrier identified on the learning side was limited time spent on campus. It could be argued that both responses are clearly indicative of more, not less, face-to-face interactions needing to be planned and incorporated within curriculum.

While research by Ledwith, Lee, Manfredi, and Wildish (1998) suggests that diverse groups take much longer to become effective, Summers and Volet (2008) indicate six months as being the approximate minimum time necessary for culturally heterogeneous groups to work effectively. Viewed in this light, the case for the reduction of the face-to-face interface, via enhancement of blended learning, has worn thin. Intercultural competencies and understanding evolves through interactions with others (Barro, Jordan, & Roberts, 1998). According to Barro et al. (1998), "Culture is not something prone, waiting to be discovered but an active meaning-making system of experiences, which enters into and is constructed within every act of communication" (p. 83). Through interaction, individuals become more aware of (their) own cultural norms and make them explicit, a process that can be described as *making the familiar strange*.

Viewing Intercultural Competency through Social Exchange Theory

In addition to the argument above—and adding further credibility to the case for face-to-face being the better choice than blended learning, insofar as enhancement of ICC development is concerned—are several aspects of social exchange theory (SET) developed by Thibaut and Kelley (1959). Social exchange theory is a broad approach used to explain and predict three dimensions to developing cross cultural skills:

- *Relationship maintenance* has a fundamental premise that human behavior is an *exchange of rewards* between actors, with exchanges (or *social interactions*) comprising enduring long-term social relations and with increasing social distance resulting in decreasing cooperation (Buchan et al., 2002; Zafirovski, 2005). Thibaut and Kelley's (1959) theory examines personal relationships in terms of costs versus benefits. What rewards do we receive from a given relationship, and what does it cost us to obtain those rewards? The theory takes into account how satisfied players would be with the relationships they choose to maintain. This, if juxtaposed with the findings of the scholars discussed earlier (Ledwith et al., 1998; Summers & Volet, 2008), would mean that lesser face-to-face interaction would result in lesser satisfaction (rewards) for players.
- *Exchange processes* are a function of reciprocal stimuli, with exchanges tending to breakdown if not reciprocated, that is, allowing an imbalance to permeate the exchange (interaction) process.
- *Social interaction* assumes that individuals establish and continue social relations on the basis of their expectations that such relations will be mutually advantageous. Such interaction allows for greater reciprocal exchanges (stimuli), and more opportunity for building enduring long-term social relations.

Further, the noted SET theorist Homans (1958) maintains that "the more one is likely to engage in an action, the more valuable its reward" (p. 600). While proponents of BL might argue that contact time and overall hours of faculty-student interaction are not necessarily negatively impacted, research by Meyer (2007) highlights three distinct advantages of face-to-face discussions in scenarios involving multicultural student groups: (a) the emotion, energy, fluidity, and ease of face-to-face exchanges, which capture very real advantages of face-to-face exchanges; (b) the ability to read nonverbal signs (body language, facial expressions) are seemingly critical to some students; and (c) immediate feedback (through nonverbal cues or verbal responses from their classmates), i.e., the students' points-of-view are immediately evaluated and in a way that is more memorable and also easier to respond and react to in the face-to-face discussion. Socially and emotionally, face-to-face oral communication is a rich medium as maintained by Garrison and Anderson (2003).

While SET and ICC are not meant to be interpreted as one and the same, they complement each other. The underlying premise of both SET and ICC is that social relations are a phenomenon permeating all aspects of behavior and social exchanges. The concepts of exchange and cultural competence are interdependent and closely intertwined.

Unit Description

The primary aim of the intercultural competency unit, of which the participants were a part, was to consider the issues of intercultural competence for people working in the area of international management and diversity. The unit takes the position that valuing differences and managing diversity is central to successful international management. In preparation of developing knowledge and skills of intercultural competence, the unit explores new and emerging developments that have changed what international managers are currently facing, and likely to face, in the coming years. Students successfully completing the unit are able to develop intercultural competencies and a global mindset which is demonstrated through experiential learning. The unit objectives include effectively managing people across cultures, being an effective team player in diverse environments, critically evaluating facets of international management, and appreciating the importance of managing change within a multicultural environment. To achieve the unit objectives, both the face-to-face and blended learning modes supported the need for course-based interaction. Well-structured interactions throughout the learning process encouraged the development of ICC skills through the adoption of the KOLB model.

Experiential activities were designed for both F2F and blended learning. Social exchange theory is based on the premise that behavior is an exchange of rewards between actors. The concept of exchange within the ICC context includes social gratification. As such, in order to develop ICC skills, tools such as the discussion board encourage students to experience, reflect, think and act in order to transform their experiences into active cross cultural learning. As experiential learning includes as one of its four pillars concrete experiences (CE), team-based activities were developed for both face-to-face and blended learning, to develop CE skills such as relationship building and understanding cross-cultural issues. Cross-cultural virtual team-based assessments, in-class assessments requiring cross cultural group formation, and case study analysis were some of the opportunities presented to students to encourage social exchanges, thereby developing their ICC. Cross-cultural groups were formed based on country background; for example, one group may have had four members from four different countries.

Method and Results

Participants

Participants included students enrolled in a unit of a postgraduate program at an Australian university. Questionnaires were administered by the authors during regular classroom time. Students were briefed as to the content and purpose of the survey. Participants were requested to place their completed surveys in a designated

drop-off box, which insured anonymity. The students in the sample come from 17 countries, with the majority (22%) being Australian born, followed by Chinese (21%) and Vietnamese (13%) students. Slightly more than half of the students (35 students, or 51%) were enrolled for a Master's Degree in Human Resource Management, followed by a Master's Degree in International Business (30 students, or 44%). A larger proportion of students (55 students, or 80%) had industry experience. We were interested in examining perceptual data of students' experiences after face-to-face and after blended learning. Like much survey research, this survey asked participants for their own perceptions of their experiences in relation to the unit objectives described earlier.

Instrumentation

We examined students' perception of blended learning and face-to-face in a cross-cultural context by way of a survey that included: (a) 20 items adapted from the studies of Bailey & Morais (2004), Lewis (2010), Meyer (2007), Orhan (2008), Skelton (2008), and Smart and Cappel (2006) (see Table 1); (b) eight demographic questions (see Table 2); and (c) two open-ended questions ("What are the advantages of studying in a blended learning mode for you?," and, "What are the disadvantages of studying in a blended learning mode for you?"). Students' responses to all 28 Likert-scale items typically ranged from *strongly disagree* to *strongly agree*. The survey included two separate sections, one requesting perceptual responses to face - to-face experiences and one to blended learning experiences. In total, we collected questionnaires from 80 students, which was the total number of students enrolled for this unit. A number of questionnaires (12) were not included in our subsequent analysis, as relevant parts of the questionnaires were not filled in. After eliminating questionnaires that were not filled in correctly, we had responses from 68 students that could be used for empirical analyses. In line with the unit objectives, principles of SET and core skills required for ICC, the 20 items and the two open ended questions were examined against three dimensions: (1) social interaction, (2) relationship maintenance, and (3) exchange of rewards (see Table 3).

Results

The 13 items of the overall learning experience scale, as depicted in Table 2, were subjected to a series of exploratory factor analyses using SPSS. Prior to performing the analyses, the suitability of the data for exploratory factor analyses was assessed using a principle components analysis. Inspection of the correlation matrix revealed the presence of some coefficients of .3 and above. The Kaiser-Meyer-Oklin value was .83, exceeding the recommended value of .6 (Kaiser, 1970, 1974), and Barlett's test of sphericity (Barlett, 1954) reached statistical significance supporting the factorability of the correlation matrix.

Students were asked to rank, on a seven-point Likert scale, their perception of blended learning specifically. The results revealed 63% broadly agreeing (*strongly agree* and *agree*) and 17% broadly disagreeing (*strongly disagree* and *disagree*) to the statement, "I enjoyed the blended learning environment," while 46% broadly agreed to the statement, "I prefer blended learning to face-to-face." This "convenience" factor surfaced in the open-ended responses. Participants broadly agreed (86%) that "time spent in the face-to-face class was worthwhile," while only 31% broadly agreed that "time spent learning through BL was worthwhile." The majority of participants (72%) broadly agreed that "having responsibility for my own learning was useful*"* and "having control of my own learning material was useful" (71%), while 47% preferred to take all courses in a blended learning environment. The discussion board was an active tool for both face-to-face and blended learning modes and contained activities which required different forms of engagement addressing various ICC skills.

Selected direct responses from the two open-ended questions ("What are the advantages of studying in a BL mode for you?," and, "What are the disadvantages of studying in a blended learning mode for you?") are summarized in Table 3.

Discussion

Implications of Findings

Perceptual data indicate that face-to-face learning is potentially more effective in a highly cross-cultural setting where the main objective is to develop skills in intercultural competencies. The principal objective of this exploratory paper has been to examine the influence of face-to-face learning as compared with blended learning on the development of ICC skills. This was done through the lenses of SET, a more ambitious sociological theory, which views human behavior and relations as a phenomenon permeating all facets of social life. We maintain that applying SET to areas of management, including cross-cultural management and management education, lends to SET's explanatory value, which has been felt in diverse disciplinary areas. Responses to the open ended questions indicate that social exchange and interaction plays a fundamental role in the process of constructing ICC skills. As knowledge is fluid and dynamic, it takes on new meanings relative to the activity and situations under consideration (Brown, Collins, & Duguid, 1989). We

Table 1
Face-to-Face vs Blended Learning

SET principles and ICC skills*	Item	After face-to-face		After blended learning		
		Mean	*SD*	Mean	*SD*	*p*
ER	Discussion was in depth and comprehensive	4.00	0.87	3.31	0.90	.000***
ER,SI,RM	I remember details on the ideas in our discussion	3.75	0.78	3.43	0.87	.013*
ER,RM,SI	I learn more in this setting	4.03	0.88	3.04	1.28	.000***
ER,RM,SI	I learn better in this setting	3.94	0.98	2.90	1.27	.000***
ER,RM,SI	I remember who said what in our discussion	3.55	1.15	2.79	1.15	.000***
ER,SI,RM	I was able to communicate with other students during the semester using the discussion board	2.95	1.17	3.06	1.08	.472
ER,SI,RM	I was able to share learning experiences with other students using the discussion board	3.06	1.19	3.12	1.12	.522
ER.SI,RM	The discussion board created a sense of community with fellow students	3.11	1.24	3.09	1.15	.904
ER,SI,RM	The ability to use the discussion board enabled me to collaborate with the other students	3.16	1.17	3.07	1.21	.350
ER,RM	The instructor encouraged me to become involved in the learning experience	4.03	0.91	3.52	1.00	.000***
ER	I was able to interact with the instructor during the learning experience	4.06	0.96	2.80	1.21	.000***
ER	I was able to interact with the instructor outside the regular class time	3.64	0.99	3.00	1.17	.001**
ER,SI,RM	The supporting resources made available to me were helpful for my learning experience	3.91	1.00	3.59	1.02	.000***

Note. *SI-Social Interaction; RM-Relationship Maintenance; ER- Exchange of Rewards
Note. *$p < .05$; **$p < .01$; ***$p < .001$

acknowledge that in order for the learning experience to be integrated and holistic, the process of knowledge construction involves the learners, the interactions that the learners engage in, and the cultural tools that facilitate such interactions such as TML.

Limitations

Our results must also be interpreted in light of their limitations. One such limitation is the relatively small sample of students in this study. However, the adequacy of the sample should be viewed as a function of the institutional and academic variables and therefore cannot be generalized across different contexts. The Australian university, which our study is based on, is considered to be a small university with small class sizes. A second limitation is the use of our choice of survey to examine perceptions of blended learning and face-to-face interaction to students' learning experiences. This type of research may be what Goodyear and Ellis (2008) term as "simplistic comparisons" (p. 141). To avoid such simplistic comparisons, studies may benefit from a more holistic approach. Despite these limitations, the current study gives preliminary evidence of the use of face-to-face and blended learning within cross-cultural settings.

Future Research

Our findings hold promise for researchers and educators alike in the area of cross-cultural management and management education in that our results provide support for the importance of context, which is significantly related to cross-cultural studies and curriculum development and design. In comparison to most management education topics, blended

Table 2
Demographics

Characteristic	Frequency	%
Gender		
Female	37	54.4
Male	31	45.6
Age Groups		
20-29	51	75.0
30-39	13	19.1
40-49	4	5.9
Work Experience		
Yes	55	80.9
No	13	19.1
Enrolment Status		
International Student	49	72.0
Local Student	19	28.0
Type of Enrolment		
Full Time	52	76.5
Part Time	16	23.5
Discipline		
Masters of Commerce (HRM)	35	51.5
Honours (HRM)	1	1.5
Grad. Dip. Commerce (IB)	8	11.8
Masters of Commerce (IB)	22	32.4
Other	2	2.9
Prior Experience in Blended learning		
Yes	35	51.5
No	33	48.5

Table 3
SET, ICC, and Face-to-Face vs Blended Learning

SET & ICC	Unit Objectives	Responses	
		Advantages of blended learning	Disadvantages of blended learning
Social Interaction	Managing diversity through group work, team-based activities and experiential learning	Probably did not get to develop ICC but the flexibility was great; good for those who are shy to contribute in class	Little opportunity to get to know other cultures, love direct contact and group work, had good past experiences, learn a lot from other cultures
Relationship Maintenance	Valuing differences, developing intercultural competence	Need to get the unit completed; less interested in team work right now	BL makes difficult to embrace other cultures. Continued working with some of my class mates in other units because of my relationship with them; blended learning encourages stereotyping. Future international managers sitting in class, wanted to network with them also.
Exchange of Rewards	Managing effectively people across cultures and social interactions	No class time constraints; sometimes hard to get to classes because of work	Learned so much from contact classes. Face-to-face was worthwhile for me; wanted to work with other locals to learn about their culture; wanted the interaction so prefer face-to-face; face-to-face was more energetic, felt very real world; can't understand sometimes, need lecturer and classmates

learning, within the context of Australian cross-cultural management curriculum, is in its infancy. Any conclusions consistently supported by scientific methods add enormously to our understanding of innovative pedagogies. It is recommended that research continue to be undertaken on institutional, cultural and contextual influences on innovative pedagogies, specifically as it relates to technology. At the time of the study, the application of TML was not as sophisticated, which, while a limitation, also contributes to opportunities for future research. Interesting contributions in this regard (Garrison et al., 2000; Goodfellow, Lea, Gonzalez, & Mason, 2001; Goodyear & Ellis, 2008; Harasim, 2000) point to the benefits of investigating TML. Future studies will also benefit from examining Davis' (1989) Technology Acceptance Model (TAM), which provides a theoretical base for examining students' perceptions and acceptance of computer mediated communication tools. Such studies may potentially provide a sound basis for examining factors that contribute to student acceptance, attitude, and behavioral intention of technology within different learning environments. Additional tests are needed, which include cross-cultural variables within other country contexts so that comparisons between studies can be made.

Conclusion

While researchers in management education have, in recent years, dedicated substantial scholarly efforts to understanding the dynamics of technology towards proactive pursuits of change in curriculum design, cross-cultural theorists and social psychologists have instead focused on topics such as diversity management, cross-cultural leadership, and entrepreneurship instead. From these perspectives, technology is either presented as an opportunity to ensure that institutions are keeping abreast with times or as something that has to be done and which individuals must cope with. We maintain that work in the area of technology and management education within highly multi-cultural settings is important for a broad understanding of the social psychological dynamics of change, but there is also a need for viewing individuals, in this case future international managers, as potentially active participants in the process. An integrative theoretical framework for understanding these dynamics can help to fill gaps because intercultural competencies are an important precursor for coping in a borderless society.

References

Alavi, M., & Gallupe, R. B. (2003). Using information technology in learning: Case studies in Business and Management Education Programs. *Academy of Management Learning and Education, 2*(2), 139-153.

Anderson, V. (2008, December). *Re-imagining "interaction" and "integration": Reflection on a university social group for international and local women*. Paper presented at the meeting of the ISANA International Conference, Auckland, New Zealand.

Arbaugh, J. B., Cleveland-Innes, M., Diaz, S. R., Garrison, D. R., Ice, P., Richardson, J. C., & Swan, K. P. (2008). Developing a community of inquiry instrument: Testing a measure of the community of inquiry framework using a multi-institutional sample. *The Internet and Higher Education, 11*(3-4), 133-136.

Arkoudis, S., Yu, X., Baik, C., Borland, H., Chang, S., Lang, I., Lang, J., Pearce, A., & Watty, K. (2010). *Finding common ground: Enhancing interaction between domestic and international students*. Retrieved from www.cshe.unimelb.edu.au/research/projectsites/enhancing_interact.html

Avery, D. R., & Thomas, K. M. (2004). Blending content and contact: The roles of diversity curriculum and campus heterogeneity in fostering diversity management competency. *Academy of Management Learning and Education, 3*(4), 380-396.

Australian Government. (2012). *Australia in the Asian century*. Retrieved from http://www.asiaeducation.edu.au/policy_and_research

Azriel, J., Erthal, M., & Starr, E. (2005). Answers, questions and deceptions: What is the role of games in business education? *Journal of Education for Business, 81*(1), 9-13.

Bailey, K. D., & Morais, D. B. (2004). Exploring the use of blended learning in tourism education, *Journal of Teaching in Travel and Tourism, 4*(4), *23-36.*

Barro, A., Jordan, S., & Roberts, C. 1998. Cultural practice in everyday life: The language learner as ethnographer. In M. Byram & M. Fleming (Eds.), *Language learning in intercultural perspective*, (pp. 76-97). Cambridge: Cambridge University Press.

Bartlett, M. S. (1954). A note on the multiplying factors for various $\chi 2$ approximations. *Journal of the Royal Statistical Society*, *16*(2), 296-298.

Barwick, H. (2011, June 2) Aussie net traffic growth to surpass global average. *Computerworld*. Retrieved from www.computerworld.com.au/article/388747/aussie

Bledsoe, M. T., Oatsvall, R., & Condon, D. (2010). Diversity management: Seeking validation. *Journal of Diversity Management, 5*(1), 23-30.

Briguglio, C. (2006a, October). *Can structured intervention improve intercultural communication in multinational student teams?* Paper presented at the International Conference on Intercultural Communication Competencies, Singapore.

Briguglio, C. (2006b, December). *Empowering students by developing their intercultural communication competence: A two-way process*. Paper presented at

the 17th ISANA International Conference, University of New South Wales, Australia.

Brower, H. H. (2003). On emulating classroom discussion in a distance-delivered obhr course: creating an on-line learning community. *Academy of Management Learning and Education, 2*(1), 22-36.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, *18*(1), 32-42.

Buchan, R., Croson, R., & Dawes, R. (2002) Swift neighbours and persistent strangers: A cross-cultural investigation of trust and reciprocity in social exchange. *The American Journal of Sociology, 108*(1), 168-170.

Christianson, L., Tiene, D., & Luft, P. (2002) Examining online instruction in undergraduate nursing education, *Distance Education, 23*(2), 213-230.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology, *MIS Quarterly, 13*(3), 319-340.

Deardorff, D. K. (2004). *The identification and assessment of intercultural competence as a student outcome of internationalization at institutions of higher education in the United States.* (Doctoral dissertation). North Carolina State University, Raleigh, NC.

Deardorff, D. K. (2006). The identification and assessment of intercultural competence as a student outcome of internationalization at institutions of higher education in the United States. *Journal of Studies in International Education*, *10*(3), 241–266.

Deardorff, D. K. (Ed.). (2009). *The SAGE handbook of intercultural competence*. Thousand Oaks, CA: Sage

Dewey, J. (1916). *Democracy and education*, NY: The Free Press.

De George-Walker, L., & Keeffe, M.(2010) Self-determined blended learning: A case study of blended learning design. *Higher Education Research and Development*, *29*(1),1-13.

Duffy, T., & Kirkley, J. R. (2004). *Learner-centered theory and practice in distance education: Cases from higher education*. Mahwah, NJ: Lawrence Erlbaum.

Dziuban, C. D., Hartman, J. L., & Moskal, P. D. (2004). Blended learning. *Educause Center for Applied Research Bulletin*, *7*(1), 12.

Egan, M. L., & Bendick, M. (2008). Combining multicultural management and diversity into one course on cultural competence. *Academy of Management Learning & Education*, *7*(3), 387–393.

Fincher, R., Carter, P., Tombesi, P., Shaw, K., & Martel, A. (2009). Transnational and temporary: Students, community and place-making in central Melbourne. Retrieved from www.transnationalandtemporary.com.au.

Freeman, M. (1995). Peer assessment by groups of group work. *Assessment and Evaluation in Higher Education, 20*(3), 289–301.

Garcia, M., Hudgins, C., Musil, C., McTighe, C., Nettles, M. T., Sedlacek, W. E., & Smith, D. G. (2001). *Assessing campus diversity initiatives: A guide for campus practitioners*. Washington, DC: Association of American Colleges and Universities.

Garrison, D. R., & Anderson, T. (2003). *E-Learning in the 21st century: A framework for research and practice.* London: Routledge.

Garrison, D. R., Anderson, T., & Archer, W. (2000) Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education, 2*(2-3), 87-105.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, *7*(2), 95-105.

Garrison, D. R., & Arbaugh, J. B. (2007) Researching the community of inquiry framework: Review, issues, and future directions, *The Internet and Higher Education*, *10*(3), 157-172.

Garrison, D. R., & Vaughan, N. (2008) *Blended learning in higher education***.** San Francisco: Jossey-Bass.

Getty, J. M., & Getty, R. L. (2003). WebCT as supplement for large classes: How effective is it in improving grades. *Journal of Hospitality and Tourism Education*, *15*(4), 50-55.

Goltz, S. M., Hiatapelto, A. B., Reinsch, R. W., & Tyrell, S. K. (2008). Teaching teamwork and problem solving concurrently. *Journal of Management Education, 32*(5), 541-562.

Goodfellow, R., Lea, M., Gonzalez, F., & Mason, R. (2001) Opportunity and e-quality: Intercultural and linguistic issues in global online learning. *Distance Education, 22*(1), 65-84.

Goodyear, P., & Ellis, R. (2008) University students' approaches to learning: Rethinking the place of technology, *Distance Education*, *29*(2), 141-152.

Graham, C. R. (2006) Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning: Global perspectives*, *local designs* (pp. 3-21). San Francisco, CA: Pfeiffer Publishing.

Harasim, L. (2000). Shift happens: Online education as a new paradigm in learning. *The Internet and Higher Education, 3*(1-2)**,** 41-61.

Homans, G. C. (1958) Social behavior as exchange, *American Journal of Sociology, 63*(6), 597-606.

Holtbrugge, D., & Mohr, A. T. (2010). Cultural determinants of learning style preferences. *Academy of Management Learning and Education, 9*(4), 622-637.

Kaiser, H. (1970). A second generation little jiffy. *Psychometrika, 35*(4)*,* 401-415.

Kaiser, H. (1974). An index of factorial simplicity. *Psychometrika, 39*(1)*,* 31-36.

Kayes, C. D. (2002). Experiential learning and its critics: Preserving the role of experience in management learning

and education. *Academy of Management Learning and Education, 1*(2), 137-149.

Kittler, M. G., Rygl, D., & Mackinnon, A. (2011). Beyond culture or beyond control? Reviewing the use of Hall's high-/low-context concept, *International Journal of Cross Cultural Management*, *11*(1), 63–82.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. London, UK: Prentice Hall.

Kolb, A.Y., & Kolb, D. A. (2005). Learning styles and learning spaces: Enhancing experiential learning in higher education. *Academy of Management Learning and Education, 4*(2), 193-212.

Kulik, C. T., & Roberson, L. (2008) Common goals and golden opportunities: Evaluations of diversity education in academic and organizational settings. *Academy of Management Learning & Education*, *7*(3), 309–331.

Ladyshewsky, R. K., & Flavell, H. (2012) Transfer of training in an academic leadership development program for program coordinators, *Educational Management Administration and Leadership, 40*(1), 127-147.

Leask, B. (2009). Using formal and informal curricula to improve interactions between home and international students. *Journal of Studies in International Education, 13*(2), 205-221.

Ledwith, S., Lee, A., Manfredi, S., & Wildish, C. (1998) *Multi-culturalism, student group work and assessment.* Oxford: Oxford Brookes University.

Lewis, G. S. (2010) I would have had more success if...: Student reflections on their performance in online and blended courses, *American Journal of Business Education, 3*(11), 13-21.

McDonnell, I. (2000) An electronic tutorial: A teaching innovation for tourism management studies. *International Journal of Tourism Research, 2*(5), 367-374.

Milem, J., Chang, M., & Antonio, A. L. (2005). *Making diversity work on campus: A research-based perspective.* Washington, DC: Association of American Colleges and Universities.

Montgomery, C. (2009). A decade of internationalisation: Has it influenced students' views of cross-cultural group work at university? *Journal of Studies in International Education, 13*(2), 256-270.

Meyer, A. K. (2007). Student perceptions of face-to-face and online discussions: The advantage goes to. *Journal of Asynchronous Learning Networks, 11*(4), 53-69.

Orhan, F. (2008) Redesigning a course for blended learning environment. *Turkish Online Journal of Online Education, 9*(1), 10-20.

Paulisse, K. W., & Polik, W. F. (1999). Use of WWW discussion boards in chemical education. *Journal of Chemical Education, 76*(5), 704-708.

Pillay, S., & James, R. (2013). Gaming across cultures—Experimenting with alternate pedagogies. *Education + Training, 55*(1), 7-22.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5), 5.

Redpath, L. (2012). Confronting the bias against on-line learning in management education. *Academy of Management Learning and Education, 11*(1), 125-140.

Sigala, M., & Christou, E. (2003). Enhancing and complementing the instruction of tourism and hospitality courses through the use of on-line educational tools, *Journal of Hospitality and Tourism Education, 15*(2/3), 6-15.

Simkins, T., Coldwell, M., Close, P., & Morgan, A. (2009). Outcomes of in-school leadership development work: A study of three NCSL programmes, *Educational Management Administration and Leadership, 37*(1), 29-50.

Skelton, D. (2008) An investigation into the learning environments of blended delivery (e-learning and classroom) in a tertiary environment, *International Journal of Learning, 15*(5), 85-94.

Smart, K. L., & Cappel, J. J. (2006). Students' perceptions of online learning: A comparative study. *Journal of Information Technology Education, 5*(1), 201-219.

Summers, M., & Volet, S. (2008) Students' attitudes towards culturally mixed groups on international campuses: Impact of participation in diverse and non-diverse groups. *Studies in Higher Education, 33*(4), 357-370.

Thibault, J. W., & Kelly, H. H. (1959). *The social psychology of groups*. New York: John Wiley.

Yamazaki, Y., & Kayes, D. C. (2004) An experiential approach to cross-cultural learning: A Review and integration of competencies for successful expatriate adaptation, *Academy of Management Learning and Education, 3*(4), 362-379.

Zafirovski, M. (2005). Social exchange theory under scrutiny: A positive critique of its economic-behaviourist formulations. *Electronic Journal of Sociology, 2*(2), 1-40.

Wong, B. M., Etchells, E. E., Kuper, A., Levinson, W., & Shojania, K. G. (2010). Teaching quality improvement and patient safety to trainees: A systematic review. *Academic Medicine*, *85*(9), 1425-1439.

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Chinese Students' Perceptions of Characteristics of Effective College Teachers: A Mixed Analysis

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This study aimed to investigate Chinese students' perceptions of effective teaching. Four hundred and thirty college students participated in this investigation. They were asked to identify 3 to 6 characteristics of effective college instructors and explain why. Themes were extracted from these qualitative data via constant comparison analysis, which then were analyzed quantitatively via descriptive and canonical discriminant analysis. The results showed that the Ethical theme was the most frequently perceived characteristic of effective college teachers. Interestingly, this theme was not reflected in the teacher evaluation forms that are currently used to evaluate teachers in China. Further, the themes identified in this study were compared with themes identified in Onwuegbuzie et al.'s (2007) study among U.S. students. The theme of Responsive received the lowest endorsement in both countries. Further, the theme of Expert had a very high endorsement rate in both countries. Also, the theme of Student-Centered received the highest endorsement from U.S. participants, in contrast to a modest endorsement from Chinese participants. Three themes, Humorous, Open-Minded, and Glamour, emerged as new themes in the Chinese sample. The implications of these findings are discussed.

Student evaluations of teachers (SETs) can be tracked as early as the 1920s (Kulik, 2001). Since then, SETs have been developed for different purposes. For example, in the 1990s, SET was adopted for administrative purposes rather than for student or faculty improvement. In the 2000s, SETs were used to improve higher education (Onwuegbuzie, Daniel, & Collins, 2009). In recent years, many universities and colleges worldwide have implemented SETs for personnel decisions such as tenure and promotion. Meanwhile, a number of studies have been conducted investigating how SET was related to effective teaching (e.g., Ginns, Prosser, & Barrie, 2007; Schulte, Slate, & Onwuegbuzie, 2011). This issue has been further discussed in international discourse in recent years. Agnew (2011) investigated the impact of school socioeconomic status on SET rating in New Zealand and claimed that students from mid socioeconomic status score their teachers higher than do students from any other socioeconomic status. Shirbagi (2011) claimed that Iranian students perceived SET differently based on their gender. Female students were more in agreement with teachers' charisma and leniency in SET than were male students in Iran.

Researchers (e.g., Alhija & Fresko, 2009; Anderson et al., 2012; Kane, Sandretto, & Heath, 2004; Kulik, 2001; Okpala & Ellis, 2005; Onwuegbuzie et al., 2009; Onwuegbuzie et al., 2007; Slate, LaPrairie, Schulte, & Onwuegbuzie, 2011) have claimed that students' perceptions were important to effective teaching for college instructors because they served as a motivational factor. Some characteristics of effective teaching with respect to SETs have been identified in various studies. For instance, caring for students and their learning, teaching verbal skills, and being dedicated to teaching were identified in Okpala and Ellis's (2005) study. Pedagogical skills, knowledge of subject, and interpersonal relationships emerged in Kane et al.'s (2004) study. Further, teaching style, presentation skills, enthusiasm, and fairness related to grading were identified in Crumbley, Henry, and Kratchman's (2001) study. Onwuegbuzie et al. (2007), who investigated 912 college students' perceptions of characteristics of effective college instructors, identified the following nine themes that represented effective teacher characteristics: *responsive*, *enthusiast*, *student-centered*, *professional*, *expert*, *connector*, *transmitter*, *ethical*, and *director*. Onwuegbuzie et al.'s (2007) article has attracted much attention since its publication in 2007. Indeed, for six consecutive years, it was the most downloaded article among all articles ever published in the *American Educational Research Journal*. Further, using Harzing's (2009) Publish or Perish software and Google Scholar, already this article has been cited in more than 100 works.

SETs in the Chinese Context

SETs have been used in Chinese universities and colleges since the 1980s, and it now has become a dominant approach to measuring teacher effectiveness (Wei & Liu, 2013). Researchers (e.g., Ding, Wang, & Chen, 2011; Luo & Cheng, 2012; Wei & Shen, 2002; Wu & Yan, 2009; Wu & Yu, 2012) explored SETs with respect to effective teachers in China both theoretically and empirically. On one hand, theoretical studies (e.g., Luo & Cheng, 2012) have led to the conclusion that the essence of effective teaching is to help students accumulate learning experience and to develop their critical thinking skills. To achieve this goal, college faculty members must set up a teaching objective that helps students become independent learners.

Meanwhile, college faculty members are recommended to have a belief that both faculty and students make progress in their classes. That is, they are not knowledge deliverers; rather, they need to possess an open attitude to their students and to learn something from their students. During this teaching process, both college faculty members and their students gain new knowledge through communication. In addition, effective college faculty members are expected to be good time managers. They use time efficiently and effectively in their classrooms. They have a plan on how to control time in order to maximize students' learning. Another set of theoretical studies has represented the synthesis of Western research in the SETs domain (e.g., Ding et al., 2011; Sun, 2009; Wang, 2011; Zhou, 2012, 2013).

A number of comparative studies (e.g., Lou & Wei, 2011; L. Wang, 2007, 2010) explored the similarities and differences between the SETs used by U.S. and China's administrators, including aims, indicators, and implications. In these studies, researchers usually selected one (or several) SET forms from each country as a basis for comparison. Wang (2007) selected SET forms from a U.S. university and a Chinese university and concluded that the content, the emphasis, and the methods in the U.S. SET forms were consistent with social constructivist beliefs such as knowledge construction by students and instructors, student-centered instruction, and development of students' abilities and skills. In contrast, SET forms in China were constrained to traditional teaching beliefs such as transmitting knowledge from an instructor to their students and teacher-centered teaching. In addition, U.S. SET forms had indicators to assess instructors' fairness that is a missing part in Chinese SET forms. Lou and Wei (2011) argued that both U.S. and Chinese SET forms are aimed to evaluate effective teaching. However, U.S. SET forms included more indicators on student learning than did Chinese SET forms. In summary, SET forms in China have tended to evaluate how well teachers delivered their lectures. The underlying principle in Chinese SET forms has been to assess how well the instructor was transmitting knowledge in a teacher-centered class setting. In contrast, SET forms in the United States have tended to evaluate student-centered pedagogy with an emphasis on educational democracy.

On the other hand, in most empirical studies, researchers have characterized effective teaching in China as being heavily reliant on SET forms (e.g., Wei & Shen, 2002; Wu & Yan, 2009; Wu & Yu, 2012). Wu and Yan (2009) investigated characteristics of effective college teachers at two universities, one research-based and the other teaching-based. The analysis was based on a four-dimension SET form for the teaching-based university and a five-dimension SET form for the research-based university. The two SET forms had four dimensions in common: teaching attitude, teaching content, teaching method, and teaching effect. Wu and Yan (2009) found that students from the research-based university emphasized teaching effect more than did students from the teaching-based university when analyzing the SET data. Meanwhile, all students perceived that teaching attitude and teaching content were important for effective teaching.

Aside from the aforementioned empirical studies that were based on established SET forms, a few studies have been conducted to elicit college students' opinions regarding effective instructors. In particular, Cai and Zhang (2005) concluded that college students valued teaching methods, teaching effects, and teaching attitudes as being the most important aspects of effective instruction. Wei (1993) identified five dimensions of college instructors' effective teaching: teaching skills, depth of the content knowledge the instructor possessed, teaching style, positive attitude, and student-teacher interaction. Wang (2008), who investigated 300 college students' perceptions of effective college instructors, extracted the following six themes: ability, responsibility, ethical, creative thinking, charms of personality, and positive attitude.

In the aforementioned studies, most Chinese universities have used their SET forms with four first-level indicators: teaching attitudes, teaching method, teaching content, and teaching effect (e.g., Mao & Qin, 2011; Wang & Li, 2011). Because these SET forms were developed by administrators, students' perceptions of effective college instructors were rarely considered as being important indicators in these forms. Another problem with Chinese university administrators developing their own SET forms was that the language used to describe these indicators was too abstract for students to understand the meanings accurately. Unlike SET forms in the United States, most SET forms used in China's universities lack empirical evidence of score reliability and score validity (Chen, 2005).

Educational Significance of the Study

Onwuegbuzie et al.'s (2007) SET model has been popular since its inception. The present study assessed this model on a Chinese sample and, thus, further examined its validity. It was hoped that the knowledge gained from the present study would be helpful in better understanding characteristics of effective college teachers in China's cultural context. Another expected contribution was that investigating students' perceptions would facilitate the development of appropriate SET instruments. As previously mentioned, most SET instruments in both China and the United States have been developed based on administrators' perceptions of effective teaching. Thus, another

contribution of the current study was that it provided students' perspectives of effective instructors, which added new understandings regarding effective teaching when developing SET constructs. It was hypothesized that there are differences between U.S. and Chinese students' perceptions due to the cultural difference. Also, it was hypothesized that there are gender and location/socioeconomics differences in the Chinese sample, which were discussed in Agnew's (2011) and Shirbagi's (2011) studies.

Research Questions

The purpose of this study was to expand on Onwuegbuzie et al.'s (2007) study by examining Chinese college students' perceptions of characteristics of effective teachers. Three research questions guided this study: (a) What are Chinese college students' perceived characteristics of effective college instructors? (b) To what extent are there differences between Chinese students' perceived characteristics of effective college instructors and those identified in Onwuegbuzie et al.'s (2007) study? and (3) What are the effects of students' gender, major, originality (i.e., location of their families), and grade point average (GPA) on their perceived characteristics of effective college instructors?

Method

Participants and Setting

A criterion sampling scheme (Onwuegbuzie & Collins, 2007) was used in this study. Specifically, the criteria used were that each participant was either an undergraduate student or a graduate (i.e., Master's) student who was majoring in either education or in psychology. Participants were 430 students from a university in a city of Shandong Province, China. The university was ranked as a Tier-2 university (i.e., top 30) among more than 100 normal universities in China. The university values both teaching and research with a student body of 30,000. Of the 430 participants, 191 were majoring in education (pre-service teacher program), whereas 239 were majoring in psychology (non-pre-service teacher program). The two majors were in the same college, the College of Education. Therefore, it was convenient for data collection. The majority of the participants was female (n = 337, 78.4%). The mean GPA of the participants was 2.67 (SD = 0.74) on a 4-point scale. The participants ranged in age from 18 to 30 years (M = 21.88, SD = 2.105). There were 332 undergraduate students and 98 graduate students (in the Master's programs) participating in this study. Participation was voluntary. They were not compensated for completing the survey.

Instrument and Procedure

All participants were administered a questionnaire that elicited information regarding Chinese college students perceptions of effective college teaching. The questionnaire contained an open-ended question, which asked college students to list between three and six characteristics that they believed effective college instructors possess or demonstrate and to provide a description for each characteristic. To collect data, we first contacted the department chairs in education and psychology. They provided a list of the courses with the instructors' names. Then, they emailed these instructors asking them to help with data collection. All instructors allowed a 30-minute time frame in their classes for students to complete the questionnaire. The first author went to each class to distribute the questionnaire and to answer questions that participants might ask. As the questionnaires were collected, two graduate students inputted data into SPSS and then helped with analyzing the students' responses to the open-ended question.

Data Analysis

A sequential mixed analysis (SMA) (Onwuegbuzie & Teddlie, 2003; Tashakkori & Teddlie, 1998) was conducted to analyze the themes pertaining to students' perceptions of characteristics of effective college teachers. Both qualitative and qualitative data were used in a sequential manner for this mixed analysis. The data source for qualitative analysis was the students' responses for the open-ended question. The data source for quantitative analysis was the themes extracted from the participants' responses via the qualitative analysis (see the following paragraphs for details). The purpose of using a mixed analysis was to obtain stronger evidence than could be obtained via a single qualitative or quantitative analysis (Caracelli & Greene, 1993).

To conduct a qualitative analysis, we adopted an inductive approach to analyze the qualitative data (Onwuegbuzie et al., 2007). In particular, we used Onwuegbuzie et al.'s (2007) 5-step approach. First, all the students' words, phrases, and sentences were read to obtain a feeling for them. Second, these students' responses then were unitized. Third, these units of information then were used as the basis for extracting a list of non-repetitive, non-overlapping significant statements, with each statement given equal weight. Units were eliminated that contained the same or similar statements such that each unit corresponded to a unique instructional characteristic. Fourth, meanings were formulated by elucidating the meaning of each significant statement. Finally, clusters of themes were organized from the aggregate formulated meanings, with each cluster consisting of units that were deemed similar in content. Next, we compared the clusters of

themes to the original descriptions to ensure that all clusters could be traced back to the original descriptions and vice versa. This analysis essentially represented constant comparison analysis (Glaser, 1965; Glaser & Strauss, 1967). Two graduate students and the first author repeated these procedures independently. The following criteria were used to interpret the Kappa coefficient: < .20 = poor agreement, .21-.40 = fair agreement, .41-.60 = moderate agreement, .61-.80 = good agreement, .81-1.00 = very good agreement (Altman, 1991). Any discrepancies were resolved to ensure a 100% inter-rater agreement. In fact, the only discrepancies pertained to the labels given to some of the themes. As a result of these discrepancies, the coders scheduled an additional meeting to agree on more appropriate labels for the themes, which led to the relabeling of some of the themes.

As the themes emerged, we compared these emergent themes to those identified by Onwuegbuzie et al. (2007). The next step was to conduct a quantitative analysis of the themes. First, the themes were converted into quantitative format (i.e., quantitized; Miles & Huberman, 1994; Sandelowski, Voils, & Knafl, 2009; Tashakkori & Teddlie, 1998). That is, if a participant listed a characteristic that was deemed to fall under a certain theme, then a score of 1 would be assigned to the theme for the student response; otherwise a score of 0 was assigned. This dichotomization process yielded what Onwuegbuzie (2003) and Onwuegbuzie and Teddlie (2003) called an *interrespondent matrix* (i.e., participant x theme matrix), which consisted of 1s and 0s, and which formed the basis of subsequent quantitative analyses via SPSS. 17.0. In particular, the interrespondent matrix was used to calculate the frequency of each theme, which was then converted to percentages that provided the prevalence rates. Further, from this interrespondent matrix, an all possible subsets (APS) canonical discriminant analysis was conducted to determine whether the endorsement rate of the themes differed as a function of gender, GPA, major, grade level, and locations. Onwuegbuzie and Daniel (2003) contended that APS discriminant analysis is better than stepwise discriminant analysis because the latter analysis is not guaranteed to find the optimal model.

Results

Frequencies of the Identified Themes

The qualitative analysis (i.e., constant comparison analysis) yielded the following 15 themes: Student-Centered, Expert, Professional, Enthusiast, Transmitter, Connector, Director, Ethical, Responsive, Patriotic, Humorous, Open-Minded, Educational Background, Glamour, and Examination. These themes are displayed in Table 1. All these themes were endorsed by at least 15 participants, representing an endorsement rate (3.5%) that was interpreted as representing a small effect size using Cohen's (1988) non-linear arcsine transformation. Interestingly, nine of these themes were the same themes that were identified by Onwuegbuzie et al. (2007), with the six remaining themes being unique to China's educational contexts.

Table 1 also presents the number and the percentage of the endorsements by all participants. The most frequently occurred themes were Ethical (65.6%) and Expert (52.6%). In contrast, the least frequently occurred themes were Responsive (3.5%), Patriotic (3.5%), and Examination (3.5%). The themes of Professional, Director, and Humorous received modest endorsements (33.7%, 42.8%, and 21.6%, respectively).

The U.S. and China college students' endorsements of the nine themes identified by Onwuegbuzie et al. (2007) were different. The theme of Student-Centered received the highest endorsements by the U.S. students (58.88%), in contrast to the theme of Ethical for the Chinese counterparts (65.6%). The theme of Expert was endorsed the second most by both U.S. and Chinese college students (44.08% vs. 52.6%, respectively). The theme of Professional also received high endorsement from both U.S. and Chinese students (40.79% vs. 33.7%, respectively). The least endorsed theme among U.S. and Chinese students was Responsive (5.04% vs. 3.5%, respectively). It is notable that 23.46% of U.S. participants advocated Transmitter, in contrast to 9.8% in the Chinese sample. The theme of Director also demonstrated a similar discrepancy: 42.8% for the Chinese students and 21.82% for the U.S. students. The U.S. participants' endorsement rates were much higher than were the Chinese participants' rates on Enthusiast, Transmitter, and Connector (29.82% vs. 16%; 23.46% vs. 9.8%; 23.25% vs. 13.3%, respectively).

Frequencies and Inferential Statistics of the Identified Themes

The APS canonical discriminant analysis revealed statistically significant results as a function of gender, major, GPA, and grade. In the following sections, we will present descriptive statistics for each independent variable first, and then we will report inferential statistics.

The frequencies of the endorsements of themes by male and female participants are presented in Table 2. Slightly more female participants endorsed the Student-Centered (25.5%), Transmitter (10.4%), Connecter (14.5%), Director (43.9%), Ethical (67.4%), and Humorous (22.3%) themes than did male participants. However, the discriminant analysis did not reveal any statistically significant differences on these themes. The highest endorsement rate for male

Table 1
Participants' Themes, Student Comments, and Number of Endorsements (N=430)

Theme	Description	Number of endorsements	Percentage of endorsements
Student-Centered	Prioritizes instruction in response to student interests or special needs; adjusts lesson plans immediately if students don't understand	103	24.0%
Expert	Has a deep understanding of the curriculum; demonstrates relevant and current content with key components of curricula	226	52.6%
Professional	Organizes in preparing course	145	33.7%
Enthusiast	Shows passion in teaching; loves the curriculum he/she taught	69	16.0%
Transmitter	Has very good skills on delivering lecture; provides typical examples	42	9.8%
Connector	Creates opportunities for students to have connection with professors within and outside of class	57	13.3%
Director	Actually knows and understands what they are teaching	184	42.8%
Ethical	Treats all students equally within and outside of class	282	65.6%
Responsive	Gives frequent and meaningful feedback to students	15	3.5%
Patriotic	Loves China	15	3.5%
Humorous	Delivers lessons in a funny way; makes class interesting; is able to laugh	93	21.6%
Open-Minded	Asks questions with multiple answers; asks students to have brainstorm	31	7.2%
Educational background	Graduated from famous university, has high degree in the field he/she taught	16	3.6%
Glamour	Charming	54	12.6%
Examination	Gives students a clear clue for the final examination	15	3.5%

Table 2
Participants' Themes in Percentages by Gender, Majors, GPA, Level of Study, and Locations

	Male/Female (%)		Education/Psychology (%)		Good/Fair (%)		Undergraduate/Graduate (%)		City/Rural (%)	
Themes	(n=93/337)		(n = 191/239)		(n = 257/173)		(n = 332/98)		(n = 142/288)	
Student-Centered	20.4	25.5	25.7	23.4	25.7	22.5	21.4*	34.7*	24.6	24.3
Expert	61.3*	50.1*	56.5*	49.4*	53.3	51.4	46.1*	74.5*	55.6	51.0
Professional	46.2*	30.3*	28.8	37.7	29.6	39.9	37.0	22.4	29.6	35.8
Enthusiast	22.6*	14.2*	17.8	14.6	15.6	16.8	14.5	21.4	18.3	14.9
Transmitter	7.5	10.4	11.0	8.8	12.1*	6.4*	8.1*	15.3*	11.3	9.0
Connector	8.6	14.5	13.1	13.4	14.4	11.6	11.4	19.4	14.1	12.8
Director	38.7	43.9	41.4	43.9	43.2	42.2	46.1	31.6	50.7	38.9
Ethical	59.1	67.4	73.8*	59.9*	67.7	62.4	59.9*	84.7*	65.5	65.6
Humorous	19.4	22.3	23.6*	20.1*	17.5	27.7	24.7	11.2	18.3	23.3
Open-Minded	8.6	6.8	9.9*	5.0*	8.9	4.6	6.6	9.2	7.0	7.3
Glamour	18.3*	11.0*	11.5	13.4	15.6*	8.1*	10.8	18.4	14.1	11.8

Note. *represents statistically significant.

was Expert (61.3%), in contrast to Ethical (67.4%) for female. Both Transmitter and Open-Minded received the lowest endorsement rates: 7.5% and 8.6%, respectively, for males and 10.4% and 6.8%, respectively, for females.

Regarding student gender, a statistically significant function was revealed, $X^2(4) = 22.64$, $p < 0.0001$, and accounted for 100% of the between-groups variance (canonical $R = 0.227$, Wilks' lambda = .95). The group centroids were 0.44 for males and -0.12 for females, indicating that this function maximally discriminated males and females. The discriminant function comprised four themes: Expert (standardized coefficient = 0.47), Professional (standardized coefficient = 0.73), Enthusiast (standardized coefficient = 0.52), and Glamour (standardized coefficient = 0.44). The cut-off score for standardized coefficient was 0.3 (Lambert & Durand, 1975). These standardized coefficients indicated that the male participants were more likely to endorse the Expert (61.3% vs. 50.1%), Professional (46.2% vs. 30.3%), Enthusiast (22.6% vs. 14.2%), and Glamour (18.3% vs. 11.0%) themes than were the female participants in this study.

The frequencies of the endorsements of themes by major (i.e., education vs. psychology) are listed in Table 2. In particular, the themes of Ethical and Expert received the highest endorsements by students representing both education (73.8% and 56.5%, respectively) and psychology (59.9% and 49.4%, respectively). The themes of Open-Minded and Transmitter received the lowest endorsements (8.9% and 12.1%, respectively, for education; and 4.6% and 6.4%, respectively, for psychology).

Regarding student major, a statistically significant function was revealed, $X^2(4) = 21.16$, $p < 0.0001$, and accounted for 100% of the between-groups variance (canonical $R = 0.22$, Wilks' lambda = .95). The group centroids were 0.25 for participants majoring in education and -0.20 for participants majoring in psychology, indicating that this function maximally discriminated education and psychology students. The discriminant function comprised four themes: Expert (standardized coefficient = 0.41), Ethical (standardized coefficient = 0.83), Humorous (standardized coefficient = 0.41), and Open-Minded (standardized coefficient = 0.51). These standardized coefficients illustrated that the participants in Education were more likely than were participants in Psychology to endorse the Expert (56.5% vs. 49.4%, respectively), Ethical (73.8% vs. 59.9%, respectively), Humorous (23.6% vs. 20.1%, respectively), and Open-Minded (9.9% vs. 5.0%, respectively) themes.

The frequencies of the endorsements of themes by GPA, namely good (i.e., Mean Range = 80-100) versus Fair (i.e., Mean Range = 60-79) are presented in Table 2. Two themes (Ethical and Expert) received the highest endorsements: 67.7% and 53.3%, respectively, for participants with good GPAs and 62.4% and 51.4%, respectively, for participants with fair GPAs. The themes of Open-Minded and Transmitter received the lowest endorsements: 8.8% and 12.1%, respectively, for students with a good GPA and 4.6% and 6.4%, respectively, for students with a fair GPA.

Regarding student GPA, a statistically significant function was revealed, $X^2(2) = 9.39$, $p < 0.009$, and accounted for 100% of the between-groups variance (canonical $R = 0.15$, Wilks' lambda = .98). The group centroids were 0.12 for participants with a good GPA and -0.18 for participants with a fair GPA, indicating that this function maximally discriminated participants with good GPAs and participants with fair GPAs. The discriminant function contained the following two themes: Transmitter (standardized coefficient = 0.67) and Glamour (standardized coefficient = 0.77). These standardized coefficients suggest that the participants with a good GPA were more likely than were participants with a fair GPA to endorse Transmitter (12.1% vs. 6.4%, respectively) and Glamour (15.6% vs. 8.1%, respectively).

The frequencies of the endorsements of themes by level of study (i.e., undergraduate students vs. graduate students) are presented in Table 2. Both undergraduate and graduate students endorsed the Ethical theme the most (59.9% for undergraduate students and 84.7% for graduate students). Expert and Director were the next most endorsed theme by undergraduate students. In contrast, Expert and Student-Centered were the second and the third most endorsed theme by graduate students. Open-Minded received the least support from both undergraduate students and graduate students.

Comparing undergraduate and graduate students, a statistically significant function was revealed, $X^2(2) = 71.98$, $p < 0.0001$, and accounted for 100% of the between-groups variance (canonical $R = 0.39$, Wilks' lambda = .85). The group centroids were 0.79 for graduate participants and -0.23 for undergraduate participants, indicating that this function maximally discriminated undergraduate and graduate participants. The discriminant function comprised four themes: Transmitter (standardized coefficient = 0.33), Student-Centered (standardized coefficient = 0.44), Expert (standardized coefficient = 0.74), and Ethical (standardized coefficient = 0.70). These standardized coefficients indicated that the graduate participants were more likely than were the undergraduate participants to endorse Transmitter (15.3% vs. 8.1%, respectively), Student-Centered (34.7% vs. 21.4%, respectively), Expert (74.5% vs. 46.1%, respectively), and Ethical (87.4% vs. 59.9%, respectively).

The last two columns in Table 2 show the frequencies of the endorsements of themes by location (i.e., city vs. rural). Two themes (Ethical and Expert)

received the highest endorsements: 65.5% and 55.6%, respectively, for participants from cities, and 65.6% and 51.0%, respectively, for participants from rural areas. The Director and Professional themes were ranked third and fourth: 50.7% and 29.6%, respectively, for city participants, and 38.9% and 35.8%, respectively, for rural participants. Again, the Open-Minded theme received the lowest endorsement: 7.0% for city participants and 7.3% for rural participants. With regard to the participants' locations, a statistically significant function was not revealed via the APS canonical discriminant analysis.

Discussion

The present research study was conducted to understand college students' perceptions of effective college instructors, replicating and extending Onwuegbuzie et al.'s (2007) mixed research study. Similar to Onwuegbuzie et al. (2007), both qualitative and quantitative data were collected and analyzed. In recent years, Onwuegbuzie et al.'s (2007) study has been replicated by several researchers (e.g., Anderson et al., 2011; Slate et al., 2011). In particular, the themes of effective college instructors were identified and compared with the themes identified in Onwuegbuzie et al.'s (2007) study. We answered each of three research questions in turn. Now we will discuss the educational and cultural meanings.

The first research question in this study asked what Chinese college students' perceived characteristics of effective college instructors were. As presented in Table 1, Chinese participants demonstrated a strong interest in two attributes: Ethical and Expert. Also, they reported moderate interest in the following three attributes: Professional, Director, and Humorous. Three themes emerging from this study had relatively low frequencies: Responsive, Patriotic, and Examination. The 11 themes identified in this study were important to China's SET research because some of them had not been identified by previous researchers in China. For instance, Ethical received the highest endorsement by college students in this study. However, most of SET forms in China have not included this important theme. Rather, these SET forms had a dimension of "teaching attitude" to investigate whether the instructors were dedicated to their teaching and whether they served as moral representatives. In our study, the Ethical theme referred to instructors treating all students equally within and outside of the class and caring about their students' behaviors and concerns. The findings from our research study suggested the use of new indicators of effective teaching in SET forms that allow the assessment of ethicalness. In fact, Wang (2008) conducted an empirical study and concluded that students perceived both being a moral representative and treating students equally as important attributes of an excellent instructor. Unlike this study, treating students equally in Wang's (2008) study received modest support with respect to effective teaching. Other researchers (e.g., Wei & Shen, 2002; Wu & Yan, 2009) have not identified Ethical as a theme in their studies. However, the identification of the theme Ethical in this study confirmed Wang's (2008) findings. Meanwhile, it further confirmed the findings in Onwuegbuzie et al.'s (2007) study. These researchers concluded that a clear gap exists between "what the developers of TEFs [SETs] consider to be characteristics of effective instructors and what students deem to be the most important traits" (p. 151).

Themes such as Expert, Professional, and Director identified in this study were consistent with findings from other studies in China (e.g., Wang, 2008; Wei & Shen, 2002; Wu & Yan, 2009), although the terms used in their studies to depict these themes might be slightly different from those that we used in our study. Most SET forms in China have contained items that represent these three themes. The theme of Humorous has confirmed some of the previous findings (e.g., Wu & Yan, 2009). Thus, SET developers might consider including Humorous as one of the important indicators included in SET surveys.

In this study, the second research question asked how these characteristics were different from those in Onwuegbuzie et al.'s (2007) study. Both similarities and differences were found between the Chinese and U.S. college students' endorsement of the nine themes. Specifically, the theme of Responsive received the lowest endorsement in both countries. The theme of Professional received similar endorsement rates by students from the two countries. The theme of Expert had a very high endorsement rate in both countries. The theme of Student-Centered received the highest endorsement from U.S. participants, in contrast to a modest endorsement from the Chinese participants. The theme of Ethical received the highest endorsement in China's sample and a modest endorsement in the U.S. sample. Other themes (e.g., Enthusiast, Transmitter, and Connector) received lower endorsement rates by the China participants than by the U.S. participants. In sum, both the U.S. and China's participants endorsed Expert and Professional as being very important characteristics of effective teaching, and not many participants in both countries mentioned Responsive as being a characteristic of effective college instructors.

The highest endorsement of the two themes (Student-Centered and Ethical) might be caused by the current educational reforms in both China and the United States. That is, beliefs regarding these reforms might have affected college students' thinking in both countries. Since the 1980s, a number of reform documents have been enacted to support student-

centered teaching in the United States. For instance, the National Council of Teachers of Mathematics (NCTM) published a series of standards documents (e.g., NCTM, 1989, 2000, 2006). A common feature of these documents was to eliminate a behaviorist way of teaching mathematics and to call for student-centered teaching in K-12 school classrooms. When college students in this study attended their schools, the student-centered teaching had become a slogan for good teaching in the United States. In China, teaching for all has been emphasized in the current curriculum reform. China's Ministry of Education initiated a series of standards documents in 2001. Stated in these documents was that equality was very important to the K-12 teachers' class (e.g., Chinese Ministry of Education [CMOE], 2001). Also, teachers were expected to be facilitators and organizers in their classrooms. In other words, according to CMOE (2001), teachers should share equal status with their students. Our data supported that the China's K-12 curriculum reform has affected students' thinking: they really cared about the way that instructors treated them.

The finding that more U.S. students endorsed Enthusiast than did their counterparts in China might reflect their different cultural dispositions. On one hand, people in the individualist culture cared about their own personal interests (Oyserman, Coon, & Kemmelmeier, 2002); if the instructors showed their passion for teaching, they demonstrated something consistent with individualist values. As a result, college students in the United States might support this value because they were nurtured by the same culture. On the other hand, a collectivist culture in China might be more in favor of the collective good (Dawson, 1993). This means that the Chinese students did not consider as important the characteristics of loving teaching or paying much more attention to individuals because they really cared about collective goals in this cultural tradition. It is well accepted that people sacrificed their personal interests to do something for a collective goal in Chinese cultural tradition.

The third research question in this study asked the effects of participants' gender, major, originality, and GPA on their perceived characteristics of effective college instructors. Several important findings emerged when addressing this question. First, the theme of Open-minded received the lowest endorsements among the 11 themes. This finding might imply that the examination-driven educational contexts in China shaped Chinese college students' beliefs of effective teaching. These students experienced highly competitive college entrance examinations, and they still needed to pass a number of closed-book examinations for teacher certification and for entering graduate schools. Being open-minded was not effective for preparing students for their examinations. Although college instructors were not responsible for helping students prepare for these kinds of examinations, students might not expect their instructors to teach something irrelevant to the examinations (e.g., open-minded problems) . Second, reflecting the only statistically significant difference with respect to the Open-Minded theme was that students pursuing an education major endorsed this theme more than did students pursuing a psychology major. This was reasonable because students majoring in education received more training with respect to China's current curriculum reform than did students majoring in psychology. The new curriculum reform supported the idea of being open-minded. Third, findings that graduate students were more likely to endorse Student-Centered and Expert than were undergraduate students might reflect the different levels of needs. In China, Student-centered teaching was popular in graduate-level courses, but not in undergraduate-level courses. Undergraduate participants did not experience student-centered teaching; as a result, they might not value student-centeredness as an important feature of effective teaching.

Fourth, although the Ethical and Expert themes received the highest endorsement in this study, there were still some differences when considering demographic variables. For instance, graduate students were more likely to endorse the Expert and Ethical themes than were undergraduate students. Education students were more likely to endorse Ethical and Expert than were psychology students. Male students were more likely to endorse Expert than were female students. Further research is needed to understand the reasons behind these differences.

Fifth, this study revealed no statistically significant differences regarding characteristics of effective college instructors between participants from the city and participants from rural areas in China. This result was inconsistent with Agnew's (2011) finding that students' socioeconomic status affected their perceptions of effective teaching.

This study represented a comparative (i.e., cross-cultural) study of students' perceptions of characteristics of effective college instructors. In particular, some themes identified in this study (e.g., Humorous, Open-Minded, and Glamour) were different from the themes identified in Onwuegbuzie et al.'s (2007) study. This finding suggests that students from different cultures might have different perceptions of effective teaching. These differences might be rooted in the cultural and contextual contexts. At this point, we call for more studies on different cultures to investigate college students' perceptions with respective to effective college instructors. Furthermore, we recommend that researchers determine the commonalities and differences across cultures. Such

investigations will not only provide valuable information for developing a good SET survey, but also contribute to teacher effective research. Although we found valuable results in this study, one must be cautioned that we only selected two majors (education/psychology) in our investigation, which limited the generalizability of our findings. This cannot represent a whole picture of college student perceptions of effective teaching in China. Thus, future studies need to include participants from other majors and different levels of universities in China in order to gain insights of effective college teaching.

References

Agnew, S. (2011). The impact of school socioeconomic status on student-generated teacher rating. *Journal of College Teaching & Learning, 8*, 39-46.

Alhija, F. N. A., & Fresko, B. (2009). Student evaluation of instruction: What can be learned from students' written comments? *Studies in Educational Evaluation 35*, 37-44. doi:10.1016/j.stueduc.2009.01.002

Altman, D. G. (1991). *Practical statistics for medical research*. London, England: Chapman and Hall.

Anderson, M. T., Ingram, J. M., Buford, B. J., Rosli, R., Bledsoe, M. L., & Onwuegbuzie, A. J. (2012). Doctoral students' perceptions of characteristics of effective college teachers: A mixed analysis. *International Journal of Doctoral Studies*, *7*, 279-309. Retrieved from http://ijds.org/Volume7/IJDSv7p279-309Anderson0360.pdf

Cai, M., & Zhang, L. (2005). An investigation on university student involvement in teaching evaluation. *Journal of Higher Education, 26*(3), 69-73.

Caracelli, V. W., & Greene, J. C. (1993). Data analysis strategies for mixed-methods evaluation designs. *Educational Evaluation and Policy Analysis, 15*, 195-207. doi:10.2307/1164421

Chen, G. (2005). Analysis of validity and reliability of SET indicators. *Journal of Higher Education Research, 28*(2), 54-57.

China Ministry of Education. (2001). *Mathematics Curriculum Standards: Grades 1 to 9*. Beijing, China: Beijing Normal University Press.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Crumbley, L., Henry, B. K., & Kratchman, S. H. (2001). Students' perceptions of the evaluation of college teaching. *Quality Assurance in Education, 9*, 197-207.

Dawson, R. (1993). *The world's classics Confucius-The Analects*. Oxford, England: Oxford University Press.

Ding, Y., Wang, Y., & Chen, K. (2011). Analysis of educational goals from 24 worldwide famous universities' SETs. *Fudan Education Forum, 9*(5), 18-22.

Ginns, P., Prosser, M., & Barrie, S. (2007). Students' perceptions of teaching quality in higher education: The perspective of currently enrolled students. *Studies in Higher Education, 32*, 603-615.

Glaser, B. G. (1965). The constant comparative method of qualitative analysis. *Social Problems, 12*, 436-445. doi:10.1525/sp.1965.12.4.03a00070

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

Harzing, A. W. K. (2009, January). *Publish or perish*. Retrieved from http://www.harzing.com/pop.htm

Kane, R., Sandretto, S., & Heath, C. (2004). An investigation into excellent tertiary teaching: Emphasizing reflective practice. *Higher Education, 47*, 283-310. doi:10.1023/B: HIGH.0000016442.55338.24

Kulik, J. A. (2001). Student ratings: Validity utility, and controversy. *New Directions for Instructional Research, 109*, 9-25. doi:10.1002/ir.1

Lambert, Z. V., & Durand, R. M. (1975). Some precautions in using canonical analysis. *Journal of Market Research, 109*, 9-25. doi:10.2307/3151100

Lou, S., & Cheng, F. (2012). Characteristics of effective college teachers and development of these characteristics. *Heilongjiang Researches on Higher Education, 218*(6), 12-15.

Lou, W., & Wei, Y. (2011). A comparison between US and China's SET activities. *Journal of New Curriculum Studies, 10*, 2-3.

Mao, J., & Qin, H. (2011). Fairly treat and use the survey results from SET forms—A review of literature. *Journal of Modern Education and Administration, 11*, 41-44.

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks, CA: Sage.

National Council of Teachers of Mathematics. (1989). *Curriculum and evaluation standards for school mathematics*. Reston, VA: The National Council of Teachers of Mathematics.

National Council of Teachers of Mathematics. (2000). *Principles and standards for school mathematics*. Reston, VA: The National Council of Teachers of Mathematics.

National Council of Teachers of Mathematics. (2006). *Curriculum focal points*. Reston, VA: The National Council of Teachers of Mathematics.

Okpala, C. O., & Ellis, R. (2005). The perceptions of college students on teacher quality: A focus on teacher qualifications. *Education, 126,* 374–378.

Onwuegbuzie, A. J. (2003). Effect sizes in qualitative research: A prolegomenon. *Quality & Quantity: International Journal of Methodology, 37,* 393–409. doi:10.1023/A:1027379223537

Onwuegbuzie, A. J., & Collins, K. M. T. (2007). A typology of mixed methods sampling designs in social science research. *The Qualitative Report, 12*, 281-316. Retrieved from http://www.nova.edu /ssss/QR/QR12-2/onwuegbuzie2.pdf

Onwuegbuzie, A. J., & Daniel, L. G. (2003, February 12). Typology of analytical and interpretational errors in quantitative and qualitative educational research. *Current Issues in Education*, *6*(2). Retrieved from http://cie.ed.asu.edu/volume6 /number2/

Onwuegbuzie, A. J., Daniel, L. G., & Collins, K. M. T. (2009). A meta-validation model for assessing the score-validity of student teaching evaluations. *Journal of Qualitative and Quantitative Research, 43*, 197-209. doi:10.1007/s11135-007-9112-4

Onwuegbuzie, A. J., & Teddlie, C. (2003). A framework for analyzing data in mixed methods research. In A. Tashakkori & C. Teddlie (Eds.), *Handbook of mixed methods in social and behavioral research* (pp. 351-383). Thousand Oaks, CA: Sage.

Onwuegbuzie, A. J., Witcher, A. E., Collins, K. M. T., Filer, J. D., Wiedmaier, C. D., & Moore, C. W. (2007). Students' perceptions of characteristics of effective college teachers: A validity study of a teaching evaluation form using a mixed-methods analysis. *American Educational Research Journal, 44*, 113–160. doi:10.3102/0002831206298169

Oyserman, D., Coon, M. H., & Kemmelmeier, M. (2002). Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin, 128*(1), 3-72. doi:10.1037//0033-2909.128.1.3

Sandelowski, M., Voils, C. I., & Knafl, G. (2009). On quantitizing. *Journal of Mixed Methods Research, 3*, 208-222. doi:10.1177/1558689809334210

Schulte, D. P., Slate, J. R., & Onwuegbuzie, A. J. (2011). Hispanic college students' views of effective middle school teachers: A multi-stage mixed analysis. *Learning Environments Research*, *14*, 135-153. doi:10.1007/s10984-011-9088-9

Shirbagi, N. (2011). Iranian university teachers' and students' views on effectiveness of students' evaluation of teaching. *Quality of Higher Education, 8*, 118-131.

Slate, J. R., LaPrairie, K., Schulte, D. P., & Onwuegbuzie, A. J. (2011). Views of effective college faculty: A mixed analysis. *Assessment and Evaluation in Higher Education*, *36*, 331-346. doi:10.1080/02602930903428684

Sun, C. (2009). US research-based universities' SET policy and features. *Journal of Heilongjiang Research on Higher Education, 184*(8), 38-40.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Applied Social Research Methods Series (Vol. 46). Thousand Oaks, CA: Sage.

Wang, L. (2007). A comparative study of indicators in US and China's SET forms. *Journal of Educational Review, 4*, 130-132.

Wang, L. (2010). Exploring the differences of student evaluation of teachers between US and China. *Journal of Henan Institute of Science and Technology, 4*, 42-44.

Wang, L., & Li, Q. (2011). Problems and solutions for college student evaluating teachers. *Journal of Sichuan College of Education, 27*(7), 16-20.

Wang, Y. (2011). Analysis of index system of the student survey form in an American university: A case study of university of Texas at Austin, *Higher Education Development and Evaluation, 27*(2), 54-59.

Wang, Z. (2008). A study on the evaluation standards for exemplary college teachers. *Journal of Educational Studies, 4*(3), 60-65.

Wei, H. (1993). *The study of reliability and validity on college students' evaluation of effective instructors*. (Unpublished doctoral dissertation). Beijing Normal University, Bejing, China.

Wei, H., & Shen, J. L. (2002). Study on teaching characteristics of effective university teacher. *Journal of Southwest China Normal University (Humanities and Social Sciences Edition), 28*(3), 33-36.

Wei, J. H., & Liu, M. (2013). A review of student evaluating their instructors. *Journal of National Academy of Education Administration, 1*, 63-66.

Wu, G., & Yu, G. L. (2012). A survey of college students evaluating their teachers from different universities. *Journal of Higher Education Management, 6*(1), 80-85.

Wu, Y. R., & Yan, G. F. (2009). Characteristics of effective college teachers' teaching and comparison. *Journal of Educational Research & Experiment, 3*, 56-59.

Zhou, T. (2012). Analysis of indicators in some SET forms from Western countries. *Journal of China University Teaching, 2*, 89-94.

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Collaborative Note-Taking: The Impact of Cloud Computing on Classroom Performance

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This article presents the early findings of an experimental design to see if students perform better when taking collaborative notes in small groups as compared to students who use traditional notes. Students are increasingly bringing electronic devices into social science classrooms. Few instructors have attempted robustly and systematically to implement this technology to facilitate student learning. This study examines the efficacy of using technology to improve student note-taking. Cloud-based collaborative software makes it possible for the first time to break down the most basic walls that separate students during the process of taking and encoding notes. Collaborative note participants used Google Drive under direction of an instructor to assess performance differences. Strong evidence is found that such groups improve grades and related learning outcomes.

Content in most social science classrooms is still primarily delivered via lecture. That quintessential collegiate institution, the classroom, remains familiar in its static delivery of content. Students individually and in isolation take notes while a professor speaks. If students are encouraged to collaborate, that interaction is solely outside the confines of the class and typically not encouraged during the lecture. While there are often times of group discussion or interaction, these are not typically during the lecture, movie, or multimedia event. Current research demonstrates that interaction actually decreases the amount of note-taking during a class session (Boch & Piolat, 2005). From chalk to PowerPoint, technology has not disrupted the normal classroom environment.

Yet there are pedagogical reasons for wanting to overcome the isolation inherent in the contemporary classroom. Modern cognitive theory has uncovered that "learners must be actively engaged in learning" to achieve deep understanding (Barkley, Cross, & Major, 2005, p. 10). Pedagogical research has demonstrated that good undergraduate education includes meaningful and extensive contact between students as well as between students and faculty, both of which encourage active learning. As early as 1994 there was evidence that collaboration could advance problem solving and critical thinking skills (Alavi, 1994). Earlier still Johnson, Mesch, and Johnson (1988) found that cooperative learning arrangements increase measures of achievement, higher-level reasoning, frequency of new ideas, and situational transfer. In his seminal work on writing across the curriculum, critical thinking, and active learning, Bean (2011) emphatically emphasized the need for small group collaboration in the classroom. In short, there is an emerging consensus that our creativity and learning are enhanced by social interactions (Resta & Laferrière, 2007).

Nowhere has the isolating effects, so devastating for critical thinking, been so pronounced as during the act of note-taking. Note-taking, at its most basic, has been defined by educational psychology as the condensation of material while simultaneously interacting in other ways with a given material set (Piolat, Olive, & Kellogg, 2005). During a traditional lecture students have time limitations which requires unique summarization and leads to "much diversification in note-taking practices" (Piolat et al., 2005, p. 293). But how effective are these practices? What are students actually gaining from this skill set quantitatively?

Typically, students are involved in a form of "copy-regurgitate" strategies (Boch & Piolat, 2005, p. 102). Students copy lecture material down in order to later perform well on tests. These kinds of notes are about the passive production of information, and the notes are a process of enhancing internal storage (Kiewra, 1987). It is also a way to focus attention. Note-taking requires a listener to be more connected to a speaker or document (Piolat et al., 2005). The problem is that although students rely on this method, its efficacy has been demonstrated to be inadequate in the classroom setting (Ambruster, 2000; Kiewra, 1985; Makany, Kemp, & Dror, 2009). The problem found in the literature is that students are not efficient note takers, meaning they only successfully capture information about 20% of the time, and they are organizationally flawed and therefore miss how information should fit together. These shortcomings, efficiency and organization, are particularly acute in individuals taking notes on a computer alone (Mueller & Oppenheimer, 2014). Mueller and Oppenheimer (2014) specifically find that computers – when used in isolation – lead to lower levels of information retention, and they postulate this is due to students trying to be stenographers with keyboards instead of actively engaging with the material.

Given the numerous problems of normal note-taking practices, much research has examined the effects of particular note-taking techniques in order to assess how it might be improved (Makany et al., 2009). Makany et al. (2009) are particularly interested in

finding ways to help improve information retention. These include clustering, concept mapping, the Cornell system, idea mapping, instant replays, knowledge maps, learning maps, mind mapping, model maps, and others. There is a consensus emerging that the key to note-taking is the ability to select, encode, and organize information (Robinson, Katayama, DuBois, & DeVaney, 1998; Samarawickrema & O'Reilly, 2003) and that well-structured notes lead to better learning outcomes (Titsworth & Kiawra, 1998, 2004). Traditional lectures and notes have been demonstrated to lead to less information transfer, less structure, and less learning than was previously thought.

Within the context of these many options, much pedagogical research has focused on creating and proposing systems for improving note-taking. Among the suggestions is the use of collaborative notes (Kam et al., 2005; Kobayashi, 2006; Miyake & Masukawa, 2000; Wu, Chen, Chen, & Chiu, 2009). Collaborative notes are mechanisms by which students summarize lecture (or other material) jointly and simultaneously. Typically such collaboration occurs in small groups (three to four students) who work together to produce a single notes document.

Unfortunately, the techniques presented in the literature are often implemented by obscure, expensive, technical software or forms not immediately user friendly (Kittle & Hicks, 2009). Additionally, prior proposals have had pricing and familiarity issues. Expensive and unfamiliar software is simply not a realistic possibility for many universities and colleges. Despite many suggestions for changing how students take notes, none have displaced the normal model. The few suggestions that do exist are not readily available in most academic settings.

As a result of these shortcomings, those interested in writing pedagogy and collaboration have recently turned to Google Drive (Kittle & Hicks, 2009). Their reasoning is Google offers three primary services not available with other tools (like wikis or specialized software): (a) users can interact inside the program, (b) Google saves are made automatically and simultaneously, and (c) Google Drive informs users of changes by other writers. Writing pedagogy—highlighted by the now ubiquitous Writing Across the Curriculum (WAC) and Writing in the Disciplines (WID) programs—now makes a strong case for the use of digital collaboration, but that work has not yet extended its research to the broader classroom environment or the process of note-taking.

The goal of this work is twofold: to bring small groups into the classroom and improve student learning via collaborative notes using non-specialized software. Given that half of the variance of students' test scores are related to lecture notes (Titsworth & Kiewra, 1998), professors should be deeply interested in ways of improving the note-taking process. This project begins where the varying research threads have left off. How can we increase student collaboration while improving note-taking practices? Further, how is this accomplished without disadvantaging students and colleges who may not have access to expensive or specialized software? The current work attempts to bridge an unfortunate gap between the well-intentioned goal of collaboration and improved note-taking in earlier pedagogical work and the pragmatic reality that faculty face in the classroom.

Project Overview

One of the most important technological advances has been the advent of the *cloud*. Cloud computing has altered the way data is processed and stored. Instead of computers being isolated units, cloud computers run software and functions on remote servers that can be accessed by any local client. The unique possibility presented by such a paradigm shift is that multiple users can run the same program simultaneously and thereby interact with one another. For word processing, this means that multiple users could access, create, and edit the same document.

A variety of cloud software is available for word processing, but for the purposes of creating a collaborative space in which students can take notes together, Google Drive was chosen due to the literature on writing noted earlier (Kittle & Hicks, 2009). It must be noted that a variety of other software could also be used; the newest versions of iWork allow for collaborative real-time editing (including for tablets). Microsoft Office 360 is working on implementing real-time editing. Emergent tools such as QUIP are also becoming potential editing packages. For the purposes of this study the goal was something that was device agnostic: there are versions of Google Drive for iPhone, iPad, Android phones and tablets, and even for every variety of laptop including Linux. It was also desirable to use software that had been previously tested in earlier studies.

Google Drive is a hard drive in the cloud. It allows files to be stored remotely and accessed from any computer. In addition, Google Drive comes with a free tool, Google Documents. Documents allows for editing remotely in a word processor that is on any tablet or computer. Multiple users can edit the same document, chat, and work together in real time. Importantly for student buy-in, unlike other office suites (such as the dominant Microsoft Office), Google Drive is completely free. The no-cost entry means that any student, at any level of institution, can participate. Expensive software is possible at some universities, but for many teaching institutions such costs are prohibitive.

Unlike traditional, locally based word processors, Google Drive can be used by a nearly unlimited number of individuals at the same time. Central to the current context, users can actually edit a single document simultaneously. One of the key failings of traditional notes is trying to record information while simultaneously processing that same information. But what if more than one student were able to work together? Could this offload some of the mental shortcomings of traditional, individualized notes? This research tests the effects of collaborative note-taking on class performance both qualitatively and quantitatively across a spectrum of classes.

The experiment was relatively simple: allow students to use collaborative notes in small groups (three to four students) and compare experiences and performances between those who used collaborative notes and those who did not. Further, compare outcomes between classrooms that participated in the experiment and control classrooms. It was also possible to administer a pre-/post-test in order to evaluate if the notes themselves were a defining factor in learning outcomes. The classes in the experiment were introductory political science and psychology classes. All classes were from state colleges.

Students freely volunteered at the beginning of each semester to participate in the collaborative note-taking. Professors (or a teaching assistant) who participated would explain to their classes about Google Drive and the possibility of joining small groups to take notes simultaneously in class. This presentation was done during the first week of each semester. Students then opted into the study if they so chose and remained part of the process for the duration of the semester. From the larger body of participants, students then freely entered into smaller note-taking groups however they wished or were randomly assigned into smaller groups by the professor or teaching assistant.

Each professor (or teaching assistant) created a blank file in Google Drive for each small group in the class. As a result, classes had multiple small groups. One American government class in the fall of 2012, for example, had four small note-taking groups of three to four students. These collaborative note groups had their own independent Google Drive document. Therefore, each class had multiple collaborative small groups, and this was constant across all classes.

Letting the professor or teaching assistant author the file granted the instructor access and ownership of each group's notes in case of disputes or issues during the semester. It also allowed for the instructor to get real-time feedback on how well students understood any particular set of lectures. Professors were able to engage students in a new way by having the ability to tailor content and get a feeling for the performance of students by the notes they were taking—a feature not possible with traditional notes. For example, in the spring of 2013, I modified and altered lectures on a section on civil liberties due to the way students were taking notes (such changes were implemented the following semester).

Methodology and Results

In order to assess the effects of collaborative note-taking, the following two strategies were employed:

- A quantitative controlled study focused on a survey tool and student grade data to assess the actual impact of collaborative notes. Did students benefit from using collaborative notes? How did students' self-reports compare to received grades? To mitigate the issue of the self-selection bias there is also a comparison between participating classes and non-participating classes.

- Standardized open-ended interviews were administered to each student participant (Turner, 2010). These interviews involved asking students identical questions during the course of the semester while using collaborative notes. In this way it was possible to see how students themselves assessed collaborative note-taking, and what, if any, benefits or discouragements they encountered. Students were asked a serious of open ended-questions and were not restricted in how to respond.

Student Performance Findings

Phase one of the experiment looked for evidence that small groups taking notes collaboratively performed better than their peers. There were two primary measures: grades and independent learning outcome performance. Ten classes participated in the experiment that included a total of 247 students where 51 students were in an experimental group (small groups using collaborative notes) and 196 students were in the control group (students in the same class who took notes individually). The benefit of the first control group was that all participants received an identical stimulus. The problem is that, given the voluntary nature of student involvement, there is a potential for selection bias. To account for the issue of selection bias a second control group, a class of an additional 32 students, was used. The control class was taught identically to the experimental sections, but the offer to take notes collaboratively was never extended. By using two control groups it was possible to minimize selection bias.

A final experimental design looked to content knowledge measures outside grades. In one of the experimental classes the college performed a student learning outcomes pre-test and post-test. These tests are designed by a panel of instructors to assess the effectiveness of classes in achieving their learning outcomes. In conjunction with the experimental design, the pre-tests and post-tests helped to detect if either the experimental or control population started at different baseline knowledge levels and to compare – apart from grades – how the groups performed after the stimuli.

Table 1 shows the class breakdowns. Unsurprisingly, each section had slightly larger female populations. The largest population of students came from American government sections. All students were either freshmen or sophomores. Further demographic information was not collected due to privacy concerns.

Table 2 shows that the average grade across all classes and groups (experimental and control) was 72.02%. Students in the experimental group had an average grade of 79.66%, while the control group average was a 71.87% (a difference of 7.79%). Students who participated in collaborative notes performed nearly a single letter grade better than did their peers in the same classes. The ANOVA result found significance at the .01 level ($F = 5.47$, $p < 0.01$). Further, Bartlett's test for equal variance returned a non-significant value, indicating a reliable ANOVA model. It is possible to say there was a statistically significant difference between the control group and the experimental group.

Is this difference due to a selection bias? The control class (a population of 32 as noted earlier) was compared to the experimental group. The average grade for the control class was 70.3%, nearly identical to that of the average control group (71.87%), and there was no significant difference in ANOVA results. As a result, it is possible to say that the grade data is probably not skewed and that the improvement to grades was likely due to the influence of collaborative notes as a variable. See Table 3.

But did the notes result in additional learning? In one experimental class, as already described, a pre-test and post-test, independent of the instructor, was administered by the department. The college in question administers these tests to students during the first week of classes to assess their baseline knowledge of a particular subject. During the last week of the semester students are then given the same test again. The post-test is required to be worth a certain percentage of a student's grade. This allows the school to measure student-learning outcomes. These tests are applied to all instructors and are not created by any one instructor but a panel of faculty in the discipline. One of the experimental classes for collaborative notes was also selected by the department to be administered a pre-/post-test. It was possible to use this data to see how the experimental group compared to the control group on an independent, professor agnostic, metric. Results are shown on Table 4.

Students who were part of the experimental group (35.41%, N = 7) performed worse than their peers (38.54%, N = 43) on the pre-test. On the post-test students who participated in collaborative note-taking did significantly better (72.49%) than their peers (64.17%). Presumably this means that the students who participated in the study had lower levels of baseline knowledge at the outset, but they had a more robust level of knowledge by the end of the class and the experiment than did their peers who had taken notes individually. The difference of 8.28% is strikingly similar to the difference in grades. As the results indicate, these are difficult tests for students. The experimental group did not just perform almost a letter grade better in grades; they also performed almost a letter grade better on the pre/post tests.

In addition to grade and pre-/post-test data, additional questionnaires were distributed to students online at the end of each semester to see what students believed about their performance and technological skill. Students were asked about the propensity to use technology, to self-report on the usefulness of collaborative notes, to consider the likelihood of using collaborative notes in the future, and to identify the areas in which they self-reported improvements using collaborative notes compared to other methods. Unsurprisingly, students who participated were at least moderately interested in technology overall. Students who participated indicated they at least sometimes turned to technology to solve problems. See Figure 1.

In order to assess student outcomes, we asked a series of questions with Likert scale responses. It was important to assess students' perception of usefulness, likelihood of using again, likelihood of use in future classes, and areas of use. The first question asked students for their enjoyment. Did students like using collaborative notes? If students did not find the experience likable, the probability that they would employ them would be low—an important measure if a faculty member wants to implement a practical solution. On this measure students overwhelmingly said yes. Seventy students (71.43%) agreed, or strongly agreed, that they enjoyed collaborative notes. See Figure 2.

Another important question was whether students would want to use this method in another class. Even if under testing conditions students found the notes useful, would they continue to employ the tool without assistance or aid from the professor? Again overwhelmingly students answered yes. Sixty-seven students (81.71%) indicated they were planning on using collaborative notes again in a future class. See Figure 3.

Table 1
Class Overviews

Class	Student Participants		Number of Sections	Male	Female
	Total	Test Group			
American Government	120	29	4	55	65
State and Local Politics	50	7	2	20	30
Comparative Politics	27	4	2	10	17
Introduction to Psychology	26	5	1	10	16
Research Methods (Psychology)	24	6	1	11	13
Total	247	51	10	106	141

Table 2
Class Grades

	Total Participants	Average Grade	Std. Dev.	Minimum Grade	Maximum Grade
All Students	247	72.02%	16.47	35.33%	99.97%
Test Group	51	79.66%	9.33	59.74%	91.57%

Table 3
Control Class

	Total Students	Average Grade	Std. Dev.	Minimum Grade	Maximum Grade
Control Class (American Government)	32	70.30%	15.32	44.46%	93.50%

Table 4
Pre-Post Test Results

State and Local Politics	Total Participants	Pre Test Avg. (Control Group)	Post Test Avg. (Control Group)
Control Group	43	38.54%	64.17%
Experimental Group	7	35.41%	72.49%

Figure 1
Employment of Technology

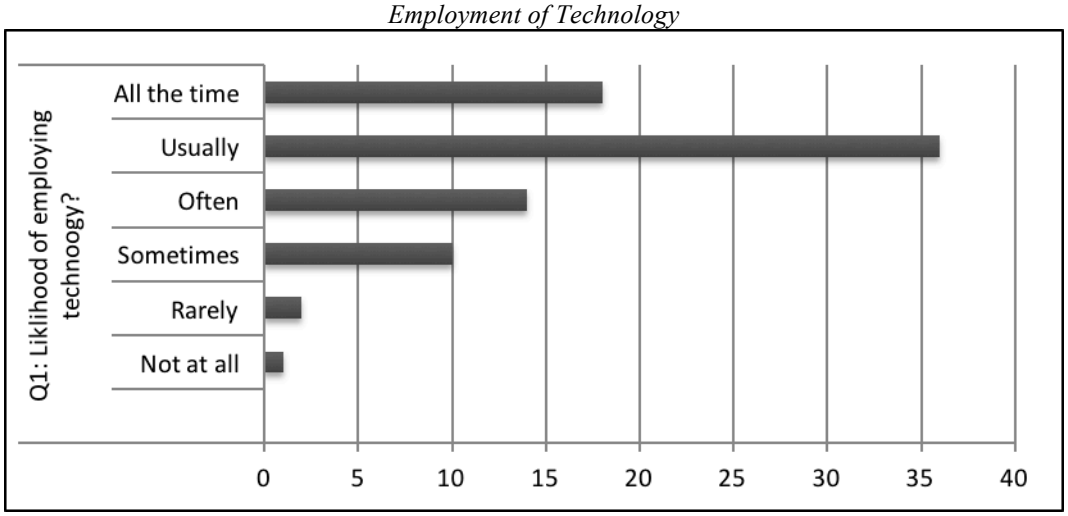


Figure 2
Collaborative Note Enjoyment

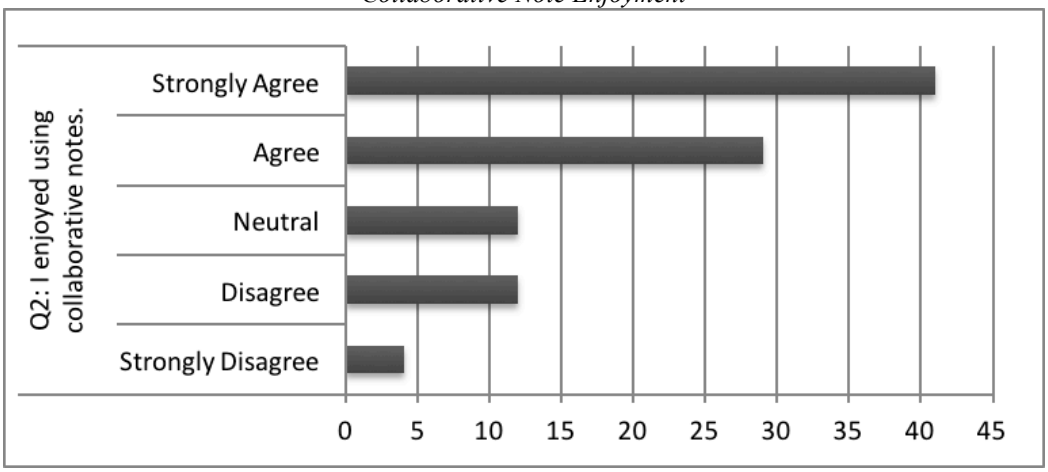
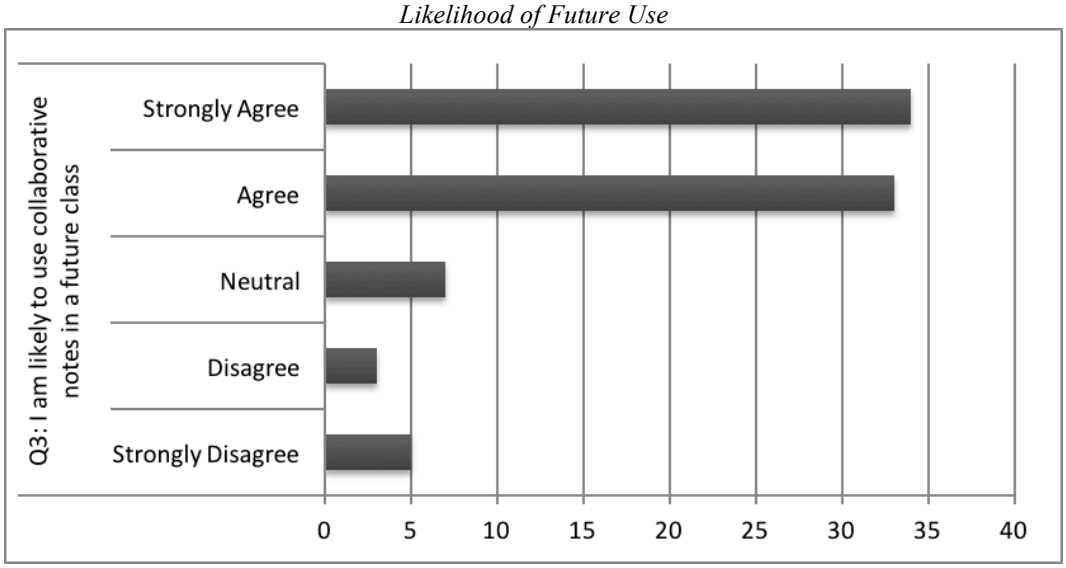


Figure 3
Likelihood of Future Use



Would students have used notes again in the current class? Almost universally participants said yes. This is interesting because it means that students increased their likelihood of collaborative notes if a professor or teaching assistant is taking an active role. This is fascinating because students did not rank professor interaction highly in their evaluation of collaborative notes. In this case, seventy-three students (89%) reported they would use collaborative notes again in their current class. See Figure 4.

It was also enlightening to see what students reported as the most useful aspects of collaborative notes. The highest marks went to *preparing for tests*, *learning*, and *interacting with classmates*. In a close fourth came *pay attention*. Clearly, students found similar benefits as to those that were postulated. Although we thought students might feel closer to the professor, this did not appear highly ranked by students. See Figure 5.

Student Interview Findings

In phase two of the experiment, a standardized open-ended interview design was employed. At the end of each semester students submitted their responses to a number of questions concerning their feelings and thoughts on the small groups and the collaborative notes. Questions were structured to elicit honest and student-worded responses from the participants in the experimental population. Across all classes, 51

Figure 4
Would Students Use Collaborative Notes Again?

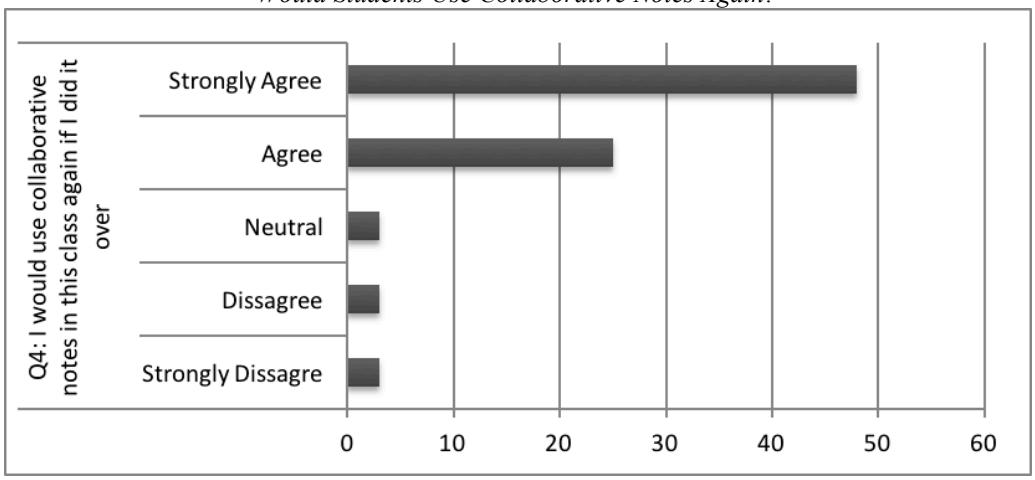
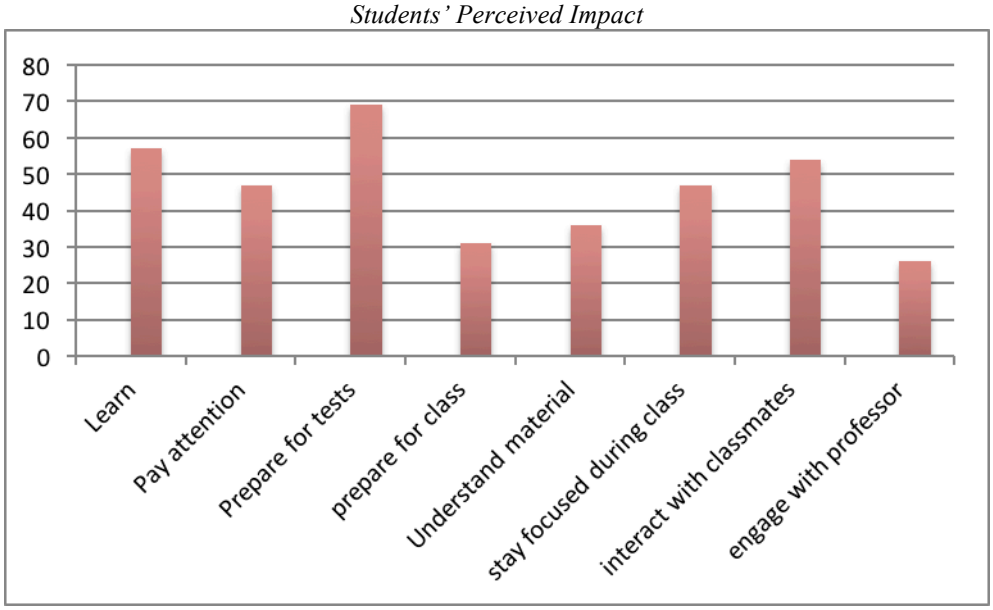


Figure 5
Students' Perceived Impact



participating students were interviewed (the entire experiment group population). Of those, 38 students provided responses. The interviews were conducted online at the conclusion of each semester. Classes were asked the listed questions in random order to avoid ordering bias.

There seemed to be general agreement that there were positive benefits to using collaborative notes (See Table 5). This seemed consistent with the fact that no students dropped from the program in any class. But student answers coalesced around three areas: organization, group learning, and improved studying. Students nearly universally liked the ability to create structure.

Shared responsibility meant that students could specialize in their note-taking. Especially fascinating and unanticipated in the research was that the division of labor allowed students to learn from each other. Students found watching the note-taking habits of their group not only useful for content learning, but also for perfecting the skill of note-taking in other classes. Students generally expressed they were able to take better individual notes in non-experiment classes by learning a wider range of note-taking techniques.

Table 5
What, if any, are the positive benefits of using collaborative notes?

	Student Responses
Keywords	Organization, Structure, and Studying
Key Concepts	Division of Labor
	"If one person is typing and another is listening, they can add on to the notes to better understand. Most teachers talk while things are [visually] presented, this way you can have a listener, typer, and catcheruper."
	"It's very helpful when studying for the test. It's hard to miss anything when three people are taking notes on something instead of just one."
	Shared Responsibility
	Easy to "add and delete highlighting" and "making changes after or during class easily." This allowed students to have "a chance to hear what [the professor] says."
	Communication
	"Can talk on it outside or inside of class"
	"Interacting with classmates."
	Learning How to Take Notes
	"You can see how others take notes."
	"We each bring good habits, so we can learn from each other"
	"You get different takes on, on how people take notes. Great to see different strategies, highlighting, etc. different ways of taking notes. [You] can apply the styles of note-taking [of] others."

Given the lack of note-taking preparation in most institutions, this was a useful finding.

Table 6 reports data about problems or issues students faced. The most reported issue was the fact that the first few classes could seem unorganized. Many students reported the coordinating with others was a new skill set. Students had to adjust to a very real mental hurdle—notes are supposed to be individualized. Working together required communication with others, and this is something that took time. Students reported it took one or two days to get together. It would appear then, that until students learned to work as a team, the organizational benefits were not present. This would indicate early help from the professor might be necessary to assist students in accepting the idea of collaborative notes.

Some students also struggled with using technology. They did not like typing and actually preferred a pen and paper. When asked follow-up questions on why this was the case, these students simply reverted to noting they were *non-tech students* and never offered any indication of why that was their preference. Many of the students in the samples came from primarily two-year institutions. Another limiting factor was access to a laptop or tablet. These students would likely want to participate, but were be barred from doing so for technological reasons. One of the advantages of Google Drive is the fact it is free. Unfortunately, student access to a computing device is a shortcoming that is not currently possible to overcome at many institutions.

Students universally perceived themselves as earning better grades than they were expecting (See Table 7). This issue is analyzed statistically and reported in detail later, but here the main interest was in students' perceptions of their grade. Students self-

Table 6
What problems or issues have you encountered with using the collaborative notes?

	Student Responses
Keywords	Coordination, Organization, Size, and Technology
Key Concepts	Collaboration vs. Individualists "In the beginning it was confusing because nobody knew what they were doing [and] everyone all at once would try to do the same thing until with time everyone knew what they were doing and eventually got organized." "Hard in the beginning to get on the same page. Took one or two days to get together." Early in the semester it "can be unstructured if you don't get together." Groups need to be teams Groups should "sit down and decide who should do what task beforehand" instead of leaving it to the process of trial and error. Group Size "Need to be in smaller groups (of three or four); need assigned positions" "Like three people is good." Groups should be student determined "Don't force us [about] how to do it" Desire to use pen and paper "Prefer paper" "Non-tech students"

Table 7
Do you believe, or notice, that collaborative notes improved your grades in this class?

	Student Responses
Keywords	Achievement, Passing, and Performance
Key Concepts	"It has helped me achieve the grades I want." "[Collaborative notes] helped me to pass."

reported they were doing better, or performing better, than they had intended or expected.

Of particular interest was the likelihood that students would use collaborative notes again in future classes (See Table 8). Some students indicated they would be taking classes together in the future to maintain their newly found group. But nearly all participants noted in some form that they would do it again. To assess this, students who took classes together again in order to use collaborative notes were interviewed in subsequent semesters—an issue handled in the next section.

Issues Raised by Students

Students were also asked to raise their own issues and questions, as well as to provide information for those thinking about collaborative notes. Technologically, students seemed to prefer laptops or iPads. Interestingly, although not related to the

Table 8
Would you use collaborative notes again in another class?

	Student Responses
Keywords	Yes
Key Concepts	"I would do [collaborative] notes again" "I would take notes with others again . . . and I grew up in the paper and pencil era!"

research here, students preferred laptops or iPads to Android tablets.

Another problem not foreseen was the difficulty of graphing on laptops. Tablets could draw, but for those using traditional laptops, a student noted, "Graphs can be difficult to incorporate." While it is possible to create graphs in Google Drive, this was apparently not intuitive enough. A review of students' notes revealed that no one had opted to do so. Several groups, however, did take a photograph of a graph drawn by hand and inserted that picture into the notes file.

There were also a variety of positive issues raised. Many students liked that electronic notes were "eco-friendly" and saved the need for paper. Others wanted to express that it was not necessary to be a computer hacker to take collaborative notes. "Don't worry about needing to be too tech savvy," said a student. For those who were technically inclined, a participant noted, "Think it's cool that professors allow the use of laptops in the classroom." For those professors who used PowerPoint, students liked the ability to mesh those file types with their electronic notes, as a student wrote, "Can put PowerPoint and notes together."

Conclusion and Future Research

It is clear from prior research that one of the focal points for pedagogical inquiry should be note-taking (Ambruster, 2000; Kiewra, 1985; Makany, Kemp, & Dror, 2009). What the research has lacked is a clear direction and pragmatic strategy professors can actually use in their classes. First is an overview of the studying findings and implications, then a review of software, discussion on the limitations of the study and lastly a few concluding comments.

Study Findings

The results here highlight a number of important insights. First, student performance can be affected by note-taking strategies. This finding is in agreement with the prior literature (Titsworth & Kiewra, 1998). These gains manifest themselves both in grades and conceptual retention. Second, students, it appears from the data, can learn from both working with others in note taking and watching others take notes. The isolation of traditional notes is probably most acute in at risk populations. Faculty rarely guide students, at-risk or otherwise, in the art of note-taking. Unless fellow students simply take the initiative to help, poor note takers have no opportunity to improve. Collaborative notes offer students the opportunity to improve a rarely modeled skill.

Third, students who take notes together can spend more cognitive energy on class material. This particular insight should help faculty who worry about the rows of computers they face in today's classroom and the potential shortcoming traditional, individualized, notes have in that environment. As Mueller and Oppenheimer (2014) have demonstrated, students who take notes individually on computers do worse at learning material than their longhand counterparts. The data here indicates that these effects might disappear if students take notes together in small groups. Given that the laptop is not likely to be toppled by the pen, it would be fruitful if future research compared student cognitive performance on laptops in small groups. The assumption in the Mueller and Oppenheimer study was that students would be taking notes in isolation. Under such conditions they apparently become stenographers and not deep thinkers. But as the qualitative research shows here, collaborative notes force students to do one job only and one job well during note-taking. In this environment, no one student is wasting cognitive energy writing everything down. Instead, they are simply playing their individual role, leaving the rest of their time to think more deeply on the material presented.

Software, Realism, and Education

Another insight is that software selection for higher education needs a healthy dose of realism. Most prior experiments concerning technology have used expensive and obscure software (Kittle & Hicks, 2009). Further studies are rarely conducted, and the average college cannot afford the potential solution even if more data could be collected. Any collegiate institution, in contrast, can implement free consumer-based software such as Google Drive (or QUIP or iWork). Far too

much experimentation in previous research has focused on tools that the average classroom cannot access. Software needs to be targeted at widespread adoption if it is to be considered a realistic tool. Future research would do well to expand on the size of the experiment performed here. Such an experiment, by design, is easily performed at a wide range of schools given the low entry cost.

Classrooms of all types—from lecture based to flipped—assume that students are, and are capable of, taking effective notes. Yet very little time is spent pedagogically attempting to improve this aspect of student learning. The data here indicates that investing more time in note-taking strategies could continue to improve student success, which is an area of deep concern in higher education today and will likely remain so for the foreseeable future. Imagine the possibilities if student success could be shifted—even slightly—by a low cost intervention such as collaborative note-taking. Small groups and Google Drive can be implemented and tested anywhere.

Limitations

There are also several limitations of the current research. As is often the case with pedagogical studies, the total population of the study is relatively low. Further, despite the attempts to control for the issue of selection bias, the lower sample size increases the probability of extreme results. Future research, however, by starting from the basic model presented here, could expand the work to a larger population to see if the effects found continue to measure significantly. The findings are also limited in their scope: social science classes. While it is reasonable to assume the effects would manifest themselves across the curriculum, the limited nature of the study cannot demonstrate that possibility with certainty. But there are two big reasons to be optimistic in the face of these limitations. First, by having classes across a number of content areas it is possible to control for professorial variation. Many pedagogical studies are often limited to a single case study. Here, while the total population is limited, it does extend across a number of classes, fields, and professors. Second, the pre- and post-test data helps demonstrate that the sample population did not start off with higher baseline knowledge. To the contrary, the experimental population apparently had lower knowledge levels. Future research could expand on the pre- and post-test measures to see how deep or widespread this collaborative learning penetrates. Given this, the results of such a significant difference are encouraging for future research.

Conclusion

The early evidence indicates that collaborative student note-taking in small groups has improved student performance both as measured by grades and by external student learning outcomes. Collaborative note-taking appears to improve note-taking skills which are crucial in academia. The data suggests there is a potentially simple and pragmatic way for faculty to improve student learning and implement laptops and mobile devices in their classrooms. Small groups learning and taking notes together appear to be a potent academic tool.

Students will continue to use computers and mobile devices, and they will increasingly use these devices in class. The rise in use is inevitable as more digital natives, and post-digital natives, enter higher education. How will faculty manage this shift? One possibility, and the easiest, is to simply continue the classical formula: lecture and individualized notes. The data here suggestions that professors should not be passive agents as mobile technologies enter into the classroom. Instead, they should harness this new technology to improve student note-taking and in the process improve student success.

Students will be most successful if we recognize the importance of small groups. Students need a space to learn how to take notes. Small groups create a space where students can not only better learn the current content, but also improve on the skill of note-taking itself. Mobile technology is allowing students to interact in a way never before possible. Faculty will need to assist if we want these devices used in positive ways that will enhance and not detract from learning. In short, it might be worth considering using small groups for taking notes together online in your next class.

References

Alavi, M. (1994). Computer-mediated collaborative learning: An empirical evaluation. *MIS Quarterly, 18*(2), 59-174.

Armbruster, B. B. (2000). Taking notes from lectures. In R.A. Flip & D.C. Cavalry (Eds.), *Handbook of college reading and study strategy research* (175-199). Yahweh, NJ: Erlbaum.

Barkley, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques: A handbook for college faculty.* San Francisco, CA: Jossey-Bass.

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

Boch, F. & Piolat, A. (2005). Note-taking and learning : A summary of research. *The WAC Journal, 16*(September), 101–113.

Johnson, W., Mesch, D., & Johnson, R. (1988). Impact of positive interdependence and academic group contingencies on achievement. *The Journal of Social Psychology*, *128*(3), 345-352.

Kam, M., Wang, J., Iles, A., Tse, E., Chiu, J., Glaser, D., … Hall, S. (2005). *Livenotes: A system for cooperative and augmented note-taking in lectures*. Retrieved from http://www.cs.berkeley.edu/~jfc/papers/05/CHILivenotes/CHI2005.pdf

Kiewra, K. A. (1987). Note-taking and review: The research and its implications. *Journal of Instructional Science, 16*(3)*,* 233-249.

Kittle, P., & Hicks, T. (2009). Transforming the group paper with collaborative online writing. *Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture, 9*(3), 525–538. doi:10.1215/15314200-2009-012

Kobayashi, K. (2006). Combined effects of note-taking/reviewing on learning and the enhancement through interventions: A meta-analytic review. *Educational Psychology, 26*(3), 459–477. doi:10.1080/01443410500342070

Makany, T., Kemp, J., & Dror, I. E. (2009). Optimising the use of note-taking as an external cognitive aid for increasing learning. *British Journal of Educational Technology, 40*(4), 619-635.

Mueller, P. A., & Oppenheimer, D. M. (2014) The pen is mighter than the keyboard: Advantages of longhand over laptop note-taking. *Psychological Science, 25*(6), 1159-1168.

Miyake, N., & Masukawa, H. (2000). Relation-making to sense-making: Supporting college students' constructive understanding with an enriched collaborative note-sharing system. In B. Fishman & S. O'Connor-Divelbiss (Eds.). *Proceedings of* the *Fourth International Conference of the Learning Sciences* (pp. 41–47). Mahwah, NJ: Lawrence Erlbaum.

Piolat, A., Olive, T., & Kellogg, R. T. (2005). Cognitive effort during note-taking. *Applied Cognitive Psychology, 19*(3), 291–312. doi:10.1002/acp.1086

Resta, P., & Laferrière, T. (2007). Technology in support of collaborative learning. *Educational Psychology Review, 19*(1), 65–83. doi:10.1007/s10648-007-9042-7

Robinson, D. H., Katayama, A. D., DuBois, N.F. & DeVaney, T. (1998). Interacive effects of graphic organizers and delayed review in concept acquisition. *The Journal of Experimental Education, 67,* 17-31.

Samarawickrema, G., & O'Reilly, J. (2003). Using concept maps to improve the quality of learning law at a distance. In G. Davis & E. Stacey (Eds.), *Quality education @ a distance,* Vol. 259 (pp. 161-168). Boston, MA: Kluwer Academic Publishers.

Titsworth, B. S. & Kiewra, K. A. (1998, April). *By the numbers: The effect of organizational lecture cues on note-taking and achievement.* Paper presented at the meeting of the American Educational Research Association, San Diego, CA.

Titsworth, B. S. & Kiewra, K. A. (2004). Organizational lecture cues and student note-taking as facilitators of student learning. *Contemporary Educational Psychology, 29*(4)*,* 447-461.

Turner, D. W. (2010). *Qualitative interview design: A practical guide for novice investigators, 15*(3), 754–760.

Wu, C., Chen, S., Chen, C., & Chiu, C. (2009). *The effect of integrating web 2.0 technology in collaborative note-taking on elementary students' science learning.* Paper presented at the World Conference on Educational Multimedia, Hpermedia, and Telecommunications, Honolulu, Hawaii.

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Qualitative-based Methodology to Teaching Qualitative Methodology in Higher Education

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There is no defined theory for teaching Qualitative Inquiry, and very few studies have focused on the topic. This study is a qualitative case study focused on the Qualitative Methods course that I teach at a college of education in Israel. The aim of the study is to explore and describe the course, to provide a true picture of my pedagogy, and to learn from it. The participants are 30 student-teachers, aged 25-46, who teach in elementary schools and have no previous research experience. Research tools used for data collection are 10 observations of the course lessons by a colleague; 10 open self-reflections written by participants; 10 self-reflections of the researcher who is, in this case, also the teacher; participants' feedback for the course; participants' responses to the researcher's routine comments written on students' papers; and field notes. The constant comparative method and the grounded theory techniques are used for analysis. Results show a qualitative research-led pedagogy model which is consistent with the conventional systematic outlook while fostering post-modern epistemological views, high levels of student's self-efficacy, high performance, self-direction, and integrity in conducting research. I hope my description would encourage other researchers to continue exploring new pedagogic strategies for teaching Qualitative Inquiry.

Qualitative-inquiry (QI) as a philosophy is important not only from a scholarly perspective but also as an integral part of the educational profession, since it underscores the immense and manifold complexity of human experience and social-cultural environment within which children and educators function (Denzin & Giardina, 2008). I will illustrate the close relationship between QI and teaching and the nature and perspectives of QI.

The Relationship Between QI and Teaching

QI handles the subjective encounter of the different realities of participants and researchers (Kacen & Krumer-Nevo, 2010). Qualitative researchers as well as educators believe that there is no objective observation or separation between observation and values. Approaches of QI attempt to describe the truth structured by the researcher through the eyes of the participant in the natural setting at the time of the event. So does education. Every day student-teacher encounters take place in natural, authentic settings and represent various subjective realities. Teachers attempt to restructure reality through the eyes of their students and react accordingly (Sabar, 2011). As subjective relativists, qualitative researchers are the main research tool of their study. Teachers in the classroom are in a very similar position, as the main educators who trace their students' behavior and ways of learning to enhance their development (Stake, 2010).

Just as qualitative researchers seek tacit knowledge to understand phenomena (Stake, 2005), teachers are engaged in an endless endeavor to understand their student's minds, perceptions, and predispositions in order to increase their motivation and improve their achievements. In order to reach a deep understanding of educational processes, research methods must be open, and there must be a good rapport between researchers and participants. QI methods fulfill this need. QI seeks to understand participants through their language, views, approaches, and expectations from life. Such understanding can be reached through the penetration into the participants' daily life by way of tracing actions and experiences from their own vantage point. Such understanding means the re-construction in the researcher's mind of the atmosphere, mentality, thoughts and emotions of the participants (Stake, 1988, 2005, 2010). In a similar way, teachers attempt to nurture open relationships with their students in order to understand their needs and facilitate their learning. This understanding means that in their own minds, the teachers rebuild their students' capabilities, thoughts, and emotions.

The understanding that researchers are attempting to achieve comprehends reality as an indivisible whole (Stake, 1988), which is the essence of the educator's job. In order to reach depth, it is necessary to spend a long time with the participants, which is what teachers routinely do. For these reasons, it is important that students who undergo training as professional educators not only know how to use techniques and carry out QI, but also internalize its basic nature, which is important for the progress of education (Denzin & Giardina, 2008). Teaching QI though, seems to be complex.

Teaching QI in Colleges in Israel

It seems that teaching QI in colleges in Israel is a complex mission, especially since the course on QI is offered as part of the Research Method course, which consists primarily of quantitative research methods (Yassour-Borochowitz, 2005). Students have

difficulties internalizing essential philosophical concepts of the qualitative paradigm and consequently find it difficult to conduct QI on their own. Only after they study and experience the process do they acquire a deeper understanding of the concepts of QI, and they come to view it as an empirical research (Hein, 2004). Several books on QI are currently available, but very few studies focus on the question of how to teach it. Unlike quantitative research, there is no defined theory for teaching qualitative inquiry methods (Goussinsky, Reshef, Yanay-Ventura, & Yassour-Borochowitz, 2011). Is this due to the special features of the area, which is more relative, ambiguous, or open when compared to quantitative research? Or else, could it be its short history, compared to quantitative research? Whichever it is, we ought to begin creating a qualitative pedagogy for the instruction of QI and the promotion of the field. This study is an attempt to move in that direction.

Every year anew, many questions arise such as: Which chapters must be taught in QI? What should be their order? Should we teach one methodology in depth and others more superficially? Is it possible to change one's concepts about research in one semester (three months)? Questions of this kind are being raised by researchers all over the world (Preissle & Roulston, 2009), and there is no agreed answer. Qualitative researchers do not share a single approach. Each researcher is first and foremost a professional who obviously wishes QI to be taught in a way which is appropriate for his/her profession. Yet, it is generally accepted that the main goal of such mandatory courses is to enable students to carry out research work in their areas of specialization and that the time assigned for research in the curriculum is too short for reaching it (Eisenhart & Jurow, 2011).

And last, most of our graduate students are teachers without prior research experience, some skeptical as to the importance of research for improving the education profession, which opens a gap between them and a minority of students who are interested in research. I have been teaching this course for ten years, changing and refining it along the way. Consequently, I have embarked on the path of exploration, discussions, and dialogue with colleagues and students alike in order to create a special methodological course that would challenge students to learn and carry out a QI and thus contribute to the students' and teachers' professional enhancement.

The Conventional and Critical Perspectives in Teaching QI

Literature on QI deals mostly with processes and procedures of conducting a research study (Stake, 1988, 2005, 2010), traditions and currents (Sabar, 2011), techniques and approaches (Creswell, 2002; Denzin & Giardina, 2008; Kacen & Krumer-Nevo, 2010), and discussions of a particular approach, such as the grounded theory (Charmaz, 2006; Glaser & Strauss, 1967), ethnography (Wolcott, 2009), action research (McIntyre, 2008), or qualitative assessment (Patton, 2002). The literature deals with manuals for particular techniques such as the ethnographic interview, participant observation, discourse analysis, systematic self-reflection, and steps of carrying out a qualitative exploration study or writing.

Eisenhart and Jurow (2011) describe a long list of additional subjects covered by researchers of QI, but they observe that there is hardly any mention of pedagogic approaches or teaching strategies for QI. They note that the scarcity of literature devoted to the instruction of QI from the 1980s to the present reflects a division of the QI community into two major polarized approaches: (1) those who tend towards the conventional direction with regard to research designs and techniques and thus practice QI while emphasizing multiple methods of data collection or explanation, and (2) those who put the emphasis on teaching beliefs, critical approaches, values, ethics and teaching post-modern epistemological principles. The latter are of the opinion that QI is in itself subjective and therefore cannot be, and does not have to attempt to be, systematic and transparent in the way conventional research is. Research of this type is considered post-modern research in which texts are the research objects and the emphasis is on making declarations, telling stories, or initiating action. Such a position implies, at least, a different use of methods and the data generated by them, and maybe even new methods (Eisenhart & Jurow, 2011). Until 1990, most of the teaching of QI was conventional and systematic. The purpose of instruction was to relate to theories and understand *how one does research* (Glesne, 1999). Hurworth (2008) found that teachers write in their syllabi *what they are going to teach* but hardly ever deal with their teaching design or pedagogical decisions concerning QI instruction.

Another clear outcome of the overviews and surveys conducted from 1999 to 2008 indicated that most of the teachers who taught QI required their students to submit a research project or at least a mini-project as part of the course requirements (Glesne, 1999; Hurworth, 2008). Researchers explain that hands-on project management provides students with insights about QI and leads them to reflect on their assumptions, while observations and interviews allow them to gain a deep view of other

people's experiences. Likewise, the actual application of research methods trains the intelligence in high-order thinking versus technical thinking (Glesne, 1999). In fact, a research project as part of course requirements in QI has become so important that it often carries a weight of 50-75% of the course grade, like some kind of a pedagogic symbol or ingredient, according to an investigator who coined the term "signature pedagogy" (Shulman, 2005, p. 52). This can be seen as an emergence of a pedagogy through which practitioners train to carry out QI work. This pedagogy consists of the following three principles: (a) students are trained to think, perform and act with integrity; (b) researchers write that involvement in authentic research activity is the most suitable pedagogy for improving cognitive skills, developing higher order thinking, implementing concepts and strategies, analyzing, synthesizing, and assessing (Preissle & Roulston, 2009); (c) learning by doing in the real world is the most enjoyable for students, raising their awareness of the philosophies underlying the different complexities of the research and demonstrating the fact that research is a process designed within context, giving students the confidence to apply research techniques and help them to integrate the fundamentals of the paradigm (Blank, 2004).

Discussing the issues mentioned provided the inspiration for this case study aimed at exploring the Qualitative Methods course that I teach at the college. I intended to take a critical look at the course, have a true picture of my pedagogy, and learn from it. The research questions were the following: (a) How do I teach QI? (b) What are the methods and techniques used? (c) What are the principles of my instruction?

Methods

Participants, Design Tools and Procedure

The participants were 30 student-teachers, aged 25 to 46, who attended my course at the College of Education. They teach a variety of subjects in elementary schools and have average-high socioeconomic status. Prior to this Qualitative Methods course, the students had attended a one-semester Quantitative Methods course, as is usual for student-teachers in colleges in Israel. They were resigned to the absolute benefits of quantitative research and had difficulty shifting gear to take an equally empirical view of qualitative design. They perceived qualitative research as too subjective and time-consuming, with limited generalizability of findings. I chose to study my class as a case from which to attempt to understand my pedagogy in teaching QI.

This case-study uses methods consisting of systematic, yet flexible, guidelines for collecting and analyzing data to construct abstractions. The flexibility and the openness of the qualitative approach enabled high levels of subject participation in the study and disclosure of tacit knowledge (Sabar, 2011).

Research tools used for data collection were 10 naturalistic 60-minute observations of my course lessons by my colleague; 10 open self-reflections written by participants; 10 self-reflections written by the researcher who is, in this case, also their teacher; participants' feedback for the course; participants' responses to the researcher's routine comments written on students' papers; and field notes. The open teacher-student relationship allowed students free expressions and high levels of participation. All participants gave written informed consent for participation and were promised the results of the analysis if they wished to receive them. Code numbers were used to maintain privacy. The research lasted a whole semester, containing 12 meetings of two hours each.

Data Analysis

Constant comparative analysis (Shkedy, 2011; Stake, 2010) and grounded theory techniques (Glaser & Strauss, 1967) were used for inductive development of a concept map. The unit of analysis was an idea. The units/themes were examined and gathered under criteria, which were grouped under categories using three-phase coding: initial, axial and selective coding (Ayalon & Sabar, 2010; Charmaz, 2006; Givthon, 2006). The constant comparison of units was adapted, changed, and redesigned as the study proceeded and resulted in a refined list of categories that were developed into conceptual abstractions called constructs.

Analyses began during data collection and continued after its conclusion. Constant literature updates and consultation with experts were part of the analysis. Core constructs containing dense descriptions of evidence were formed. Theoretical saturation was reached when the same constructs were repeated in multiple cases and no new aspects emerged from the units (Charmaz, 2006). The qualitative methodological frame used for analyses was the criteria-oriented methodology (Guba & Lincoln, 2005; Shkedy, 2011).

Results

First Order Categorization

Three main results emerged from the analysis:

1. The emerging 60 criteria out of 3100 units were coded into six main constructs: (a) methods and techniques, (b) research principles and design, (c) exposure to post-modern beliefs and outlooks, (d) presentation and discussion of outcomes, (e) critique of methods and techniques, and (f) ethical issues. The first quote is an example of a critique of methods and techniques: “I’ve read that auto-ethnography; it is literature, not research!” (Class observations) This second quote is an example of an ethical issue: “She won’t let me talk to her daughter anymore, she realized I discovered the truth about her” (Student note). Of the six main constructs, only *methods and techniques* and *principles and design* contained criteria of distinct importance; therefore, two more analyses were performed.
2. The analysis of the *methods and techniques* construct revealed the following themes: choosing research subjects, asking questions, integrating material, conducting discussions, using research tools, collecting and analyzing data, drawing conclusions, performing peer assessment, and writing and presenting research. This result answers the second question and will be discussed later.
3. The analysis of the construct *research principles and design* elicited the following qualitative principles: the researcher is the primary research "tool," and the qualitative inquiry is contextual, responsive, reflexive, recursive and reflective. It addresses vulnerability and fairness, and it fosters curiosity. This result answers the third question and will be discussed later.

To conceptualize my pedagogy and thus answer the first main research question, a second-order analysis was performed. It specified possible relationships between the categories that had been previously developed (Shkedy, 2011). The concept map was then sampled.

The Second Order Theoretical Categorization

The second order theoretical categorization was based on the existing six core categories revealed earlier. Additional questions emerged: How do we analyze data skillfully? Are there better ways of doing what we are doing? A notion that would organize and explain the pattern of first-order emerging concepts was needed. The following example written under the category of *methods and techniques* might illustrate that missing element:

> Teacher: If your unit of analysis is a sentence, then you have here two units.
> Student: Thanks for the quick answer." (Teacher's and student's written comments)

It was the *way* of instruction, that I called the "Teacher-Student Reciprocity Model" around which all constructs were constantly and dynamically active. Its high prevalence in all the categories was essential to the reframing of the final conceptual map. I cut the segments that described that practical element and put them together. A new category emerged. All categories and their properties were related to that core category. The six constructs were then examined on the horizontal and vertical axes in light of the research-led conceptual perspective to teaching (Hurworth, 2008), which I adapted at this stage, bringing new light to the whole picture of current categories. A refined different structure formed the final model of instruction.

Based on Vygotsky (1978), social learning precedes development. The teacher collaborates with the student to facilitate meaning construction in the student, as cognitive development stems from guided learning. This is how learning becomes a reciprocal experience for student and teacher. The model I used to teach qualitative methodology will then be called the teacher-student reciprocity model.

The analysis of the properties of the core category showed a unique guided and collaborative performance based instruction which combines the conventional and the post-modern approaches and composes my QI pedagogic model, which will be discussed below.

Discussion

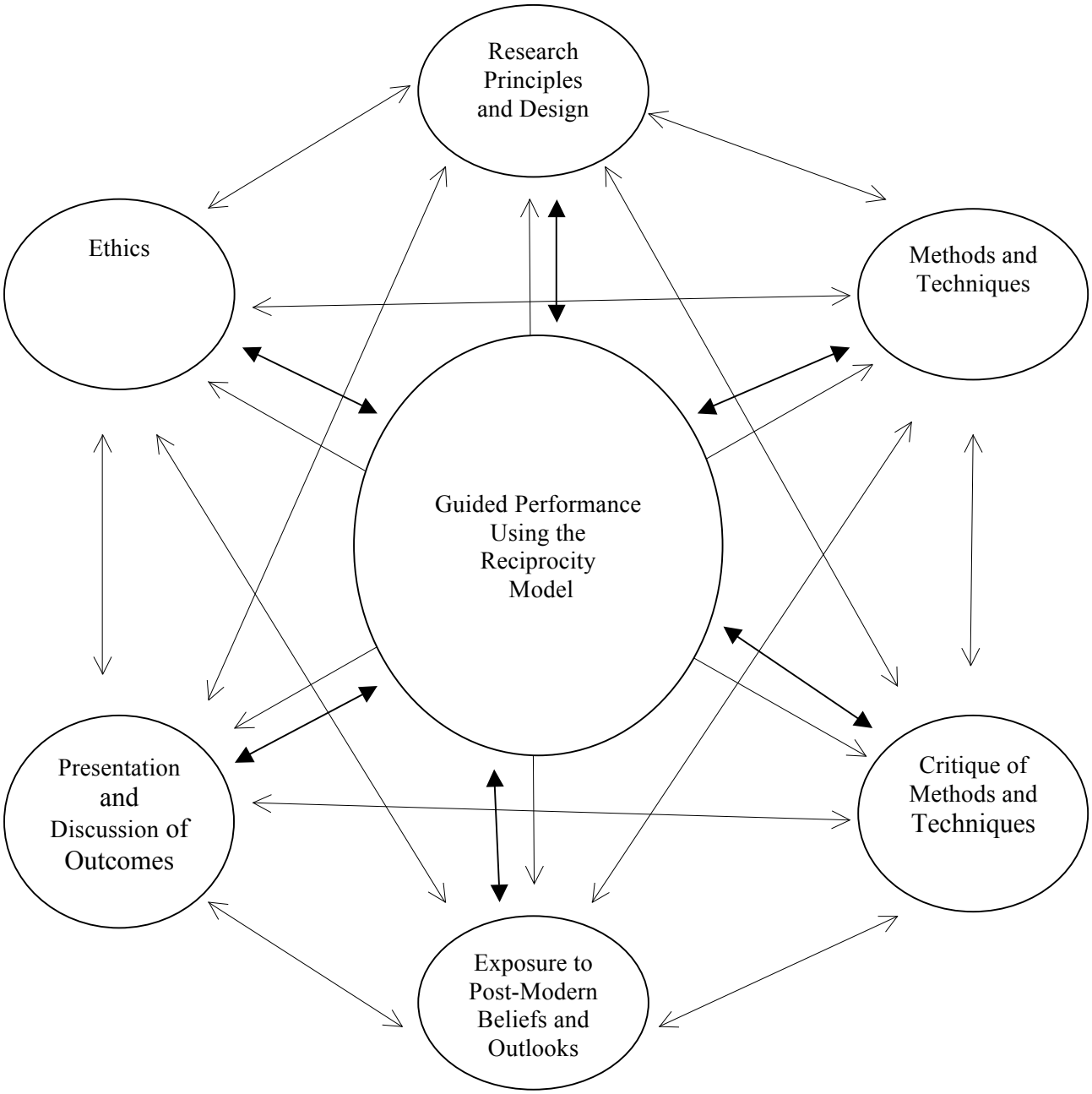
All research questions were answered. My QI instruction model emerged, with its methods, techniques and principles. In the following section I will discuss the three of them: (a) the teacher-student reciprocity model, (b) the content and process of learning, and (c) the principles of performing QI as its teaching guidelines.

The Performance Oriented Teacher-Student Reciprocity Model

The model that emerged from the analysis is centered on students' experience of conducting research with formative guidance using a teacher-student reciprocity model from the beginning to the end of the course, as shown in Figure 1.

The Formative Guided Performance containing 40% of the research units is the instruction's core action

Figure 1
The Performance-Oriented Teacher-Student Reciprocity Model of QI Instruction and Learning



around which six elements are constantly and dynamically active. Formative guidance means constant guidance that is capable of alteration by constant growth and improvement. The elements depicted in the model are linked to each other and to the core action: Implementation methods and Technologies (12%), Research Principles and Designs (11%), Exposure to Post-modern Beliefs and Outlooks (9%), Critique of Methods and Technologies (8%), Presentations and Discussions of Student Outputs (10%), and Ethical Issues (10%). The model will be discussed and illustrated through the following points:

Instructing and learning through doing. The proposed model centers on the performance experience. Both instructor and student, engaged in research experience the joy of analyzing materials, reflecting, comparing, evaluating, or criticizing in order to reach good performance. The students are instructed on an ongoing basis and improve their work by actually doing it. By the last class session they are able to submit the finished work. Students and instructor communicate in writing via a computer and by telephone. During the work questions arise concerning principles, techniques, methods, ethics, beliefs, outlooks, and their interrelations. Students' work is rewritten, and refined through the process of formative guidance. When students feel confident about their performance, they can give free rein to abstract thinking, accepting new ideas, and critical thinking. A solid foundation allows risk taking and boldness. The following is a passage written after performing data analysis:

> I feel I am doing it well; I keep correcting my work according to the comments I get. I do reflective thinking; I compare, and draw conclusions. Last Sunday my instructor told me to recheck my analysis. She would not tell me what she had seen; she just told me to look for it myself. And at one point, after categorizing the evidence again, the penny dropped! I had an insight. How didn't I see that earlier? It was fantastic. I discovered something I had not seen before. They call it "tacit knowledge." I understand what I am doing and I am not even confused with the new ideas discussed in class today. (Student reflection)

Guided performance using the teacher-student reciprocal model. The teacher-student reciprocal methodology is somewhat like a rapid response correspondence between the instructor and the student. A student submits his/her work; the instructor checks it and provides constructive comments at the following class session without delay: "You shouldn't put the same sentence in two categories. You must decide to which category it belongs and delete it from the other one. Otherwise, your analysis would not be valid" (a teacher's comment).

The instructor's immediate response to the student's work increases the student's motivation to make an effort and to progress. The individual student–teacher correspondence, which is enabled by the teacher-student reciprocal methodology, makes the students feel that the teacher wants them to succeed so they invest more effort in their work and resubmit their work without delay: "That I could make as many corrections as I needed enhanced my motivation to invest in the project. It showed that you really cared about my success" (student feedback).

This methodology includes also face-to-face meeting in a class workshop: The instructor and a student discuss the student's work while the other students sit in a circle around them as a supportive learning community who are allowed to intervene to make suggestions and comment. Sometimes the instructor comments on errors common to several students or raises a shared problem, with a discussion following. Discussions cover issues of research principles, designs, techniques, and new outlooks that students encounter while reading materials on different aspects of QI. The six areas surrounding the directed performance in the model either arise from the performance or come from reading and provide a multilateral cross-pollination.

The course duration is short, but in fact students spend much time outside of class working on their research. This instruction model gives the students the confidence that the instructor/professor/doctor is always there for them. Such investment bears fruit. The availability of an open channel for advisement, feedback, and help impacts the self-efficacy of the student to perform the study. Self-efficacy is one's faith in his ability to perform a task, and it has the potential of effecting changes (Bandura, 1997; Katz, 2012). Formative comments by the instructor helped the students enter learning situations highly self-efficacious and determined to achieve specific goals. Throughout his/her work the student monitored his/her performance and overcame failures. The high self-efficacy for learning in the initial stage materialized in successful achievement which, in a circular process, served as the foundation for high self-efficacy beliefs in the next learning (Zimmerman, 1998). The following is taken from a student's reflection: "Recently, I don't get as many comments as earlier. It boosts my self-confidence. I get great one-on-one coaching. I have never experienced this before" (Student reflection).

One type of QI in each course. Instruction is reserved for providing training and practice in the most thorough way exclusively in one selected methodology every course. Skills and techniques are being learned

systematically as one main approach which is learned in depth: students use it in their work, and from it they proceed to study the field as a whole. In the following course, another methodology will be the performance core while other methodologies will be learned and discussed but not performed. This makes the instructor's and student's job somewhat easier. The teacher-student reciprocal methodology cannot be used with students working in several methodologies in such a large group without many more instructing hours. The research assignment in the course is performed as an anchor assignment. It is conducted from beginning to end via the individual correspondence between teacher and student and under the individual guidance of a single instructor. The dedicated and systematic focus on one methodology contributes to the students' self-assurance and to the absorption of the material (Katz, 2012). In a positive environment of a learning community, students open themselves up to hear and discuss other innovative post-modern epistemological principles. "Investigating yourself is a revolutionary idea; I am not ready for it yet." (Observation)

This semester I taught QI through "collaborative action research," whereas, for example, a case study or ethnography has been learned but not actually performed. Action research represents a paradigm that recognizes the professional knowledge of the teacher as an area in a dynamic process of developing and growing, and it relates to issues arising from the teacher's experience at school (Elliott, 1995). One of many ways offered for fostering reflectiveness in teaching and teacher training is providing teachers in training with the experience of conducting action research in schools (Zimmerman, 1998).

A uniform context of research for each course. A central topic was chosen for the performance of student research. That was a school environment, and a shared topic for the current course was "motivation to learn." Topics that had been chosen for previous courses included the following: classroom climate, verbal abuse, or disabled children. A uniform research environment helps students in the joint learning of the area, which is manifested practically in collecting materials for the current literature review while still giving students the free choice within that environment to choose their preferred specific subject. Each student presented briefly in class four theoretical sources for the topic he/she chose, thereby providing each of them accessibility to much more theoretical material in a short time. The uniform context allowed in-depth exploration of a large amount of material in a short time.

Conducting research in a conventional systematic way while being exposed to a range of postmodernist topics and outlooks. A common mistake in the teaching profession is the opposition to any standard method and the constant search for special, creative methods. A profession is defined by its standard practice. There is nothing wrong with maintaining such practice provided we keep improving it over time. Down the road it is necessary to expand the range of alternative methods by presenting examples of other studies, methods, and concepts. There is a lot of room for creativity, provided the professional teacher maintains the standard practice and develops it (Stigler, 2002). Thus, once confidence in the systematic process is established, there is room for a new form of thinking, as recorded by the instructor:

> I have provided them scaffoldings of activities and skills in a well-structured and organized process, which led to new ways of looking at the world. I wanted them to assimilate the reflection as a habit, and therefore I have created opportunities for them to share with us stories from their personal experiences. Now they can cope with new ways of looking at reality. (Teacher reflection)

Considering the constructs surrounding the *guided performance* as one whole, *exposure to post-modern outlooks*, *criticism*, and *ethics* constitute 45% of the evidence, *methods* 20%, *principles* 18%, and *students' presentations* 17%. This places my pedagogy towards the center on the conventional post-modern methodology scale.

Flexibility of the model. Each course, which is conducted democratically, develops differently as a function of the students' inclinations and preferences. The directions, depth of thinking, and intellectual ability cause the learning to develop in different directions. Each course goes from a different vantage point to the general essence and reaches points that may not have been discussed at all in the previous course. One course may cover more material, and another may cover less but might go deeper in a certain direction. The pedagogy does not change if the methodology changes in the subsequent course. This flexibility provides for the moderating instructor life-long learning. In every course something different takes place. The instructor must be attentive to developments dictated by the community of learners, of which he is a member, thus improving the quality of teaching. If the foundation given to the students is solid and deep, they can do the rest on their own. A student said, “I enjoyed the organization and clarity of the inspiring discussions" (Observation). This constitutes the answer to my main research question.

Content and Process of Learning

The content of the current course consisted of performing a collaborative action research. Alongside

the learning we have initiated activities and imparted research skills that will be described below.

Course content. The course content learned systematically followed the sequence of performing a research project: integration of literature material, collection and analyzing of data, and writing and presentation of the work. Innovative topics, new approaches, values, ethics, post-modern epistemological principles, or creative writing were exposed, learned, and discussed simultaneously. Raising the topics was timed and sometimes coincidentally as a result of students coming across them in their readings. But the fact that students were required to think and discuss them, and that this learning served their thoughts rather than required their performance, caused them to like it. They said, “It tasted like more" (Teacher's reflection).

The learning process. The students worked in a variety of ways: in pairs, in groups, and individually. Some of the main activities of the students during the performance of the course include choosing the research topic, writing the literature overview, and asking questions. "One could sense how the student was actually internalizing the difference between an open and a closed question while correcting his/hers aloud. It was a pleasure to see how they responded, critiqued, and helped to draft" (Teacher reflection).

Using research tools and analyzing data were performed by using the ping-pong method systematically and deeply until reaching its mastery. Analyses were presented to the class, which as a support group gave its constructive commentary. Students had opportunities to communicate as researchers. "Over time it was possible to see that they developed expectations to share their stories to a wider audience, not only to the instructor or their peers"(Teacher reflection).

Fostering Peer Assessment, comparisons and commentary had an impact on the students' attitude toward QI and their self-identity as future researchers, as shown in the example below:

> L: Humaneness and consideration are part of the qualitative researcher's personality, don't you think so?
> D: It must be. If not, he can't be a qualitative researcher. (From observations)

Performing action research gave them a chance to see how interventions changed attitudes and behavior. It helped developing curious and critical teachers who were efficacious enough to affect their pupils.

A brief chart of course assignments. The course assignments were: five-minute oral presentation of four theoretical resources, literature review, rationale, context of the problem, purpose, questions, participants' description, design, tool description and use, data analysis, discussion, 15-minute oral presentation of the study, ethics, limitations of the study, and an in-depth reflection of the student on the process and on his/her professional progress regarding doing QI. Student – teacher face to face interactions occurred whenever each of the two sides wanted. Instructor availability contributed to the students' motivation to invest and progress.

The main skills imparted. The main skills imparted were important skills for performing QI: Know what data to collect and when, know which tools to use, and plan them, analyze data skillfully and present it effectively and Evaluating their work according to analytic rubrics developed self-assessment skills.

The principles of performing QI are its teaching guidelines. "I don't know a better way to explain qualitative inquiry than by the qualitative teaching of it." (Ellis & Bochner, 2011) The principles of performing QI that emerged from the data are the same principles that guide QI instruction:

The investigator is the primary research "tool." The researcher is responsible, and he is the commentator (Stake, 2010). He has the freedom to choose what to investigate; where to put the focus; and how, how much, when, and with whom to evaluate processes and outcomes. So is our instruction-learning constructivist view appropriate for nurturing the qualitative researcher (Katz, 2012). In this course the student as the researcher shaped and led the research process. His/her curiosity, monitoring, navigating, and thought control were deliberately nurtured. “If, I had an objection to the student's analysis and the student was able to convince me - I would defer to his/her arguments – he/she was the researcher!” (Teacher reflection)

QI occurs in context. Like in research, which is contextual (Preissle & Roulston, 2009), so also in teaching, the learning environment was authentic in terms of context, space, and time. It was open, flexible and varied, highlighting the connection between the object of learning and life. Each brought something different from that same context, and everybody learned from everybody's experience. When research subjects are related to social and personal reality, they become a special frame of reference raising interest and curiosity (Katz, 2012). Students chose a subject out of interest. And, indeed, they reported changes as a result of their work on their educational environment.

The process of QI is responsive. Responsiveness is the interaction between the researcher and the participants. Information flows in both directions and affects both. Responsiveness yields cognitive understandings related to the subject and research questions, as well as effective understandings related to

the participants (Preissle & deMarrais, 2011). Just as the process of QI is responsive-interactive, so was its instruction. I monitored the students carefully to the point of being able to lead them on their investigative journey. I was in the position both of a researcher and a learner when I shared with them the research work. My instruction was suitable for a variety of students, giving them the opportunity to be researchers, critics, and participants in my research as well as in that of other students in the class. Responsiveness increased the sense of involvement and commitment. Responsiveness encouraged students to take risks and improve their thinking. Thinking is a social activity shared among the members of the investigative community, but which is gradually internalized for reemergence as an individual activity (Vygotsky, 1978). The learners' deliberation with themselves grew out of the experience of collaborative learning, which helped develop self-regulation. Holding a conversation in an interactive process through personal teacher–student correspondence created new knowledge and learning horizons.

The process was lengthy and not simple. This learning space remained open and temporary. All the while, new ideas came up and the learning space became dynamic, and any new information could have led the discussion in new directions.

In addition to cognitive advantages, this collaborative feature promoted communication capabilities and tolerance of contradictory positions, which were important to us in discussions about new outlooks in QI. All of these were essential for their functioning as future researchers.

The process of the QI is reflexive. Just as in research response is immediate, so it was in our teaching. The teacher-student reciprocal model used by the instructor was reflexive. The impact of the teacher-student reciprocal instruction on students was almost immediate. There was no delay in their response. It was hard but rewarding: "They appreciated the fact that someone had been working just like them and with them. That was the strongest empowerment they received, and so did I as an instructor." (Teacher reflection) It is almost impossible to teach QI and not to be a researcher, since a large share of QI is social experience (Stake, 2010).

The process of QI is recursive. In QI as well as in life, evidence repeats itself. The more times and different ways and directions an issue repeats itself, the more powerful it is. The same applies to instruction: different issues have recurred in a variety of aspects. Some issues were discussed by students many times from different perspectives, making them more important or deeper.

The process of QI is reflective. I made sure to include activities intended to help develop independent thinking skills necessary for performing analyses. I arranged for activities in which learners were required to evaluate their work, present arguments, ask questions, imagine, and clarify phenomena (Katz, 2012). The QI class fostered thinking, thinking predispositions, strategies, systematic thinking and high order thinking, which included reflective and flexible thinking (Perkins & Swartz, 1992). The use of *thinking language* was abundant. It included words that addressed mind processes and products and words that described and aroused thinking (Tishman, Perkins, & Jay, 1995). The frequent occupation with thinking turned reflection into a familiar matter of routine and a part of the classroom culture.

Given that in QI the researcher is the main "tool," reflection may sharpen, refine and increase his sensitivity (Kacen & Krumer-Nevo, 2010). Reflection is a unique, internal-qualitative, personal, complex, and mostly tacit process. I believe that learners learn best through action followed by reflection on that action.

In the same way as we strive to experience in different ways experiences of others to enrich our lives, so too is our reflective experience in learning. Reflection was used to actively construct concepts, thus producing professional knowledge. The key to professional development of the reflective teacher was based on direct personal experiences, observation of peer experience, and analysis of other people experiences (Zimmerman, 1998). Group reflection created team bonding, as stated by Routman (2002): Group reflections are a thoughtful practice for the improvement of instruction and learning (Routman, 2002).

Addressing vulnerability and fairness. One of my prime objectives was to cultivate ethical positions of good performance. My students' actions and behavior throughout and after performing the research had to meet the ethical requirements for conducting research with people. At all the stages of the QI, vulnerability and fairness were raised.

Developing a researcher's curiosity. Researchers are curious by nature, and so my pedagogy fostered curiosity and motivation. Since competency does not guarantee performance if there is no motivation to use it (Katz, 2012), the motivational orientation of instruction was important for the Qualitative Methods course. I aimed at large goals and fostered self-efficacy and collective-efficacy for performing a research. The student community constantly filtered its actions through the belief system of its members.

Data collection from different and varied sources. The evidence in the QI is collected from many sources (Sabar, 2011), so also my assessment of the student's work relied on collecting evidence from different sources that met different dimensions in a rubric. Standards that students had to meet were

discussed in class. The assessment that took place during the learning process suited an open and dynamic world of knowledge and academic self-regulation of which the learner was the center.

Summary

Most researchers basically have a mainstream view (Phillips, 2006). My QI instruction model consists of a permanent base within which students carry out their research and learn the principles and techniques, which is consistent with the conventional outlook while fostering post-modern open thinking. My model is conventional-systematic combined with post-modern open thinking. The learning climate is typical of a *democratic self-directed learning organization*. It has openness, involvement, encouragement of initiative, vitality and flexibility (Katz, 2012). If we have not conducted sufficient epistemological debates between positions and outlooks in the current course, it may have been because students in this course were not yet ripe enough for more than that. Self-confidence was encouraged, and students learned to support their positions. The opportunity to correct their work over and over again, creating a teacher-student reciprocal model of work between students and instructor, raised their self-efficacy and collective efficacy to succeed. Some of them have acquired the positions of a qualitative researcher, while others will need more experience. In sum, a large amount of investment was rewarded by satisfaction. Students served refreshments in the classroom corner and invested in creating a pleasant social environment. Class sessions had a flexible structure, which changed according to the needs. It was difficult but challenging.

Conclusion and Implications

I presented a qualitative pedagogy designed to foster researchers seeking to understand things in their authentic environment in order to improve them. This pedagogy fosters thinking, reflection, and constant formative improvement; promotes curiosity and motivation; and aims at life-long learning and functioning with integrity, as required by the qualitative professional ethics.

The theoretical contribution of this research is the emergence of a QI pedagogy that works for students at a college of education. I propose a model for teaching QI with evidence indicating students' motivation and good results towards academic advancement.

Practically, each student experienced the nature of QI methodology which revealed unexpected insights about people and places previously considered known or understood. Such insights were one of the most enjoyable moments we all experienced as they happened to almost all of us:

> I would like to briefly express my opinion on your interesting and impressive methodology of this course. . .This experience has been a real discovery for me. Since my work is being done not following dry lectures. . .but with your patient guidance. The way you work compels me to think, correct, and deliberate, to get angry and again to think and correct. I don't feel commitment to follow instructions, but after each of your corrections to search for another view point that I have not yet noticed. After a huge amount of working hours, corrections and frustrations, having received my paper for the seventh time and searched it from top to bottom - I realized something huge - Only now I have started to work! (Student feedback)

I have learned that it is possible to set high standards for students, such as creating posters, getting feedback, and developing them as research papers in the future. From this research, I have gained a unique personal overview regarding my professional performance and development as a teacher and a researcher. I hope that my description will encourage other researchers to continue to explore and develop new pedagogic strategies for teaching QI.

References

Ayalon, Y., & Sabar, N. (2010). Content analysis process in the Grounded Theory. In M. Kacen and M. Krumer-Nevo (Eds.), *Data analysis in qualitative inquiry*. (pp. 359-382). Ber Sheva, Israel: Ben-Gurion University Press.

Bandura, A. (1997). *Self efficacy. The exercise of control*. New York, NY: Freeman & Company.

Blank, G. (2004). Teaching qualitative data analysis to graduate students. *Social Science Computer Review, 22*(2), 187-196.

Bochner, A., & Ellis, C. (2011, May). Writing auto ethnography and narrative in qualitative research. A workshop presented at the International Congress of Qualitative Inquiry. University of Illinois at Urbana-Champaign.

Charmaz, K. (2006). *Constructing Grounded Theory: A practical guide through qualitative analysis.* Thousand Oaks, CA: Sage.

Creswell, J. W. (2002). *Research design: Qualitative, quantitative, and mixed methods approaches.* (2nd ed.). Thousand Oaks, CA: Sage.

Denzin, N. K., & Giardina, M. D. (Eds.). (2008). *Qualitative inquiry and the politics of evidence.* Walnut Creek, CA: Left Coast Press.

Eisenhart, M., & Jurow, A. S. (2011). Teaching qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research: Educational anthropology and research methodology* (pp. 699-714). Thousand Oaks, CA: Sage.

Elliott, J. (1995). What is good action research? Some criteria. *Action Research*, *2*, 10-11.

Ellis, C., & Bochner, A. (2011). Autoethnography, personal narrative, reflexivity: researcher as subject. In N. Denzin & Y. Lincoln (Eds.), *The handbook of qualitative research* (733-768). London: Sage.

Givthon, D. (2006). Grounded Theory: The meaning of data analysis and theory building in the qualitative inquiry. In N. Sabar (Ed.), *Tradition and trends in the qualitative research* (pp. 195-227). Tel-Aviv, Israel: Dvir.

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

Glesne, C. (1999). *Becoming qualitative researchers: An introduction,* (2nd ed.). New York, NY: Addison Wesley Longman.

Goussinsky, R., Reshef, A., Yanay-Ventura, G., & Yassour-Borochowitz, D. (2011). Teaching qualitative research for human service students: A three-phase model. *The Qualitative Report, 16*(1), 126-146.

Guba, E. G., & Lincoln, Y. S. (2005). Paradigmatic, controversies, contradictions, and emerging confluences. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed.) (pp.191-215). London, England: Sage.

Hein, S. F. (2004). "I don't like ambiguity": An exploration of students' experiences during a qualitative methods course. *Alberta Journal of Educational Research, 50*(1), 22-38.

Hurworth, R. E. (2008). *Teaching qualitative research: Cases and issues.* Rotterdam, The Netherlands: Sense.

Kacen, L., & Krumer-Nevo, M. (2010). *Data analysis in qualitative inquiry*. Beer-Sheva, Israel: University of the Negev Press. (In Hebrew)

Katz, S. (2012). *Self-efficacy - Diagnosis and intervention: Eliciting self-efficacy beliefs through qualitative methodology*. Haifa, Israel: Shaanan. (In Hebrew)

McIntyre, A. (2008). *Participatory action research: Qualitative research methods series*, Thousand Oaks, CA: Sage.

Patton, M. Q. (2002). *Qualitative evaluation and research methods,* (3rd ed.), Thousand Oaks, CA: Sage.

Perkins, D., & Swartz, R. (1992). The nine basics of teaching thinking. In A. L. Costa, J. L. Bellanca & R. Fogarty (Eds.), *If minds matter: A foreword to the future,* Victoria, Australia : Hawker Brownlow Education

Phillips, D. C. (2006). A guide for the perplexed: Scientific educational research, methodolatry methodology, and the gold versus platinum standards. *Educational Research Review, 1*(1), 15-26.

Preissle, J., & deMarrais, K. D. (2011). Teaching qualitative research responsively. In N. K. Denzin & M. D. Giardina (Eds.), *Qualitative inquiry and global crises* (pp. 31-39). Walnut Creek, CA: Left Coast Press.

Preissle, J., & Roulston, K. (2009). Trends in teaching qualitative research: A 30-year perspective. In M. Garner, C. Wagner & B. Kawulich (Eds.), *Teaching research methods in the social sciences* (pp.13-21). Surrey, England: Ashgate.

Routman, R. (2002). Teacher talk. *Educational Leadership, 59*(6), 32-35.

Sabar, N. (2011). Qualitative research in education in Israel - A personal journey. *Shvilei mechkar*, *17*, 9-19.

Shkedy, A. (2011). *The meaning beyond words: Methodologies in qualitative research – from Theory to Practice*. Tel-Aviv, Israel: Ramot.

Shulman, L. S. (2005). Signature pedagogies in the disciplines. *Daedalus, 134*(3), 52-59.

Stake, R. E. (1988). Case study, In R. M. Jaeger (Ed.), *Complementary methods for research on education* (pp. 253-300). Washington, D.C. AERA.

Stake, R. E. (2005). Qualitative case studies. In N. K. Denzin & Y. S. Lincoln. (Eds.) *The Sage handbook of qualitative research* (pp. 433-466). Sage.

Stake, R. E. (2010). *Qualitative research: Studying how things work.* New York, NY: Guilford Press.

Stigler, J. (2002). Creating a knowledge base for teaching. *Educational Leadership, 59*(6) 6-11.

Tishman, S., Perkins, D., & Jay, E. (1995). *The thinking classroom: Learning and teaching in a culture of thinking*. Boston, MA: Allyn and Bacon.

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

Wolcott, H. F. (2009). *Writing up qualitative research,* (3rd. ed.) Thousand Oaks, CA: Sage.

Yassour-Borochowitz, D. (2005). Teaching a qualitative research seminar on sensitive issues: An autoethnography. *Qualitative Social Work, 4*(3), 347-362.

Zimmerman, B. (1998). Developing self-fulfilling cycles of academic regulation: An analysis of exemplary instructional model. In Schunk, D.

H. & Zimmerman, B. J. (Eds.), *Self-regulated learning* (p. 3). New York, NY: Guilford.

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Where Cultural Competency Begins: Changes in Undergraduate Students' Intercultural Competency

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Teacher preparation programs and accreditation organizations have acknowledged need for educators to demonstrate intercultural knowledge, skills, and abilities. Teacher educators are responding to emphasis in higher education to assure that graduates achieve intercultural competence (NCATE, 2008). This study compared the cultural competency of university students before and after participation in domestic intensive and intentional cross-cultural undergraduate courses. Data analysis showed that undergraduate students began their classes at the same levels of intercultural competence, with ethnocentric views that minimize cultural differences between themselves and others. Students usually began with over-estimating their intercultural competence. However, their actual developmental orientation toward cultural differences was more ethno-centric. Due to their lack of experience among people of cultures different than their own, they were more likely to minimize cultural differences and emphasize cultural commonalities. During this investigation, after the first semester, data analysis showed no statistically significant change in students' cultural competence. After a semester with higher-impact activities (e.g., cultural partnerships), subjects showed statistically significant positive gains in their orientations to cultures different than their own. Investigators concluded that domestic inter-cultural experiences may encourage university students to not only learn about others, but also learn from and with others.

The United States continues to welcome newcomers, immigrants, and refugees from many regions of the world. As a result, the United States population is increasingly diverse and includes a wide variety of racial, ethnic, language, and religious groups, as well as socioeconomic levels, giftedness, disabilities, gender, and sexual orientation.

This diversity is especially illustrated by changes over time in characteristics among children in public schools (NCES, 2013). Changing student characteristics include home language, participation in English language programs, race/ethnicity, socioeconomic status, and participation in education for students with special needs.

The U.S. Bureau of the Census (Ryan, 2013) reported that more than 26 % of the school-age population in 2011 came from homes where native languages other than English were spoken. According to NCES (2013), participation of students in programs for English language learners increased from 8.7 % in 2002 – 2003 to 9.1 % in 2011 – 2012.

Enrollment in U.S. public elementary and secondary schools shifted from 64.8 % White in 1995 to 51.7 % White in 2011 and from 13.5 % Hispanic/Non-White in 1995 to 23.7 % Hispanic/Non-White in 2011 (NCES, 2013). Given current trends in immigration and birth rates, these numbers will grow. NCES projects that, by 2021, the proportion of students of color will exceed 55 % of enrollments.

Over time, teachers have reported an increase in certain problematic issues (such as poverty and disabilities) in their schools. For example, 29.0 % of teachers reported in 2011 – 2012 that poverty was a serious problem, compared to 19.5 % in 1993 – 1994. At least 17 % of children aged 5 through 17 years old were in poverty in 1990. This proportion increased to 22 % in 2011. The percentage of public school students eligible for free- or reduced-price school lunches grew from 38.3 % in 2000 – 2001 to 49.6 % in 2011 – 2012. Participation of children between 3 and 21 years old in programs under the Individuals with Disabilities Education Act increased from 4.144 million in 1980 – 1981 to 6.429 million in 2012 – 2013 (NCES, 2013). Furthermore, 30.2 % of students came to school in 2011 – 2012 unprepared to learn, compared to 28.8 % in 1993 – 1994 (NCES, 2013).

Meanwhile, diversity among teachers in public elementary and secondary schools has increased in some characteristics and decreased in others. The race/ethnicity of teachers has changed from 86.5 % White in 1993 – 1994 to 81.9 % White in 2011 – 2012, and from 4.2 % Hispanic/Non-White in 1993 – 1994 to 7.8 % Hispanic/Non-White in 2011 – 2012. In terms of gender, 76.3 % of the teachers in public schools were female in 2011 – 2012, increased from 72.9 % in 1993 – 1994.

Educators play one of the most important roles in teaching students to function well within domestic diversity and increasing globalization. The knowledge, behaviors, and attitudes shown by teachers toward students, especially students who are different from themselves, influence the teaching and learning environments (Sleeter, 2001a). The demographic differences in contemporary society create significant social and cultural gaps between the student population and the teacher population. In fact, research suggests

that teachers' beliefs about students lead to different expectations and treatment. Unfortunately, students from cultural and linguistic backgrounds which are different than those of teachers often perform poorly in public education. Students are at risk for achievement gaps, over-representation in special education, high suspension and expulsion rates, and high drop-out rates (Jencks & Phillips, 1988; Losen & Orfield, 2002; Townsend, 2000).

Some investigators (Arthur & Collins, 2010; Solomon & Levine-Rasky, 2003) suggested that, without intervention, pre-service teachers may inadvertently stereotype students and families and respond to them in oppressive ways. Teachers need an understanding of the invisible rules within different social and cultural structures so they may build productive relationships that overcome stereotypes with students.

The demographic differences between student populations and teacher populations mean that responsible teacher education programs (TEPs) will prepare pre-service teachers for the social and cultural contexts in public schools (Bennett, 2004). In 2008, the National Council for Accreditation of Teacher Education (NCATE) included 12 elements of cultural identity in its standards for accrediting teacher preparation programs (i.e., ethnicity, race, socioeconomic status, gender, exceptionalities, language, religion, sexual orientation, and geographic region; NCATE, 2008). In 2013, the Council for the Accreditation of Educator Preparation (CAEP) issued new standards embedded throughout with aspects of diversity. The new standards referred to learning disabilities, language learners, gifted students, and students from diverse racial, ethnic, and cultural backgrounds. CAEP Standard 1 and related Interstate Teacher and Support Consortium (Council of Chief State School Officers2011) standards referred to cultural competence, individual differences, and working with families and communities. Standard 2 referred to diversity in field and practicum experiences (CAEP, 2013). CAEP documents conclude that teacher education programs must embed diversity experience and cultural competence throughout all teacher preparation courses and experiences:

- Incorporation of multiple perspectives to the discussion of content, including attention to learners' personal, family, and community experiences and cultural norms.
- A commitment to deepening awareness and understanding the strengths and needs of diverse learners when planning and adjusting instruction that incorporates the histories, experiences, and representations of students and families from diverse populations.
- Verbal and nonverbal communication skills that demonstrate respect for, and responsiveness to, the cultural backgrounds and differing perspectives learners and their families bring to the learning environment.
- Ability to interpret and share student assessment data with families to support student learning in all learning environments.
- An understanding of their own frames of reference (e.g., culture, gender, language, abilities, ways of knowing), the potential biases in these frames, the relationship of privilege and power in schools, and the impact of these frames on educators' expectations for, and relationships with, learners and their families (Council of Chief State School Officers, 2011).

In brief, teachers at all levels (primary, secondary, and post-secondary) should exemplify intercultural competence (ICC). However, neither CAEP (accrediting the teacher education programs) nor teacher licensure agencies (licensing the teacher as an individual) decree the teaching methods or the formative and summative assessments that the teacher education programs should implement.

For this study, definitions for several key terms were selected: culture, intercultural experience, intercultural differences, worldview, and intercultural competence (ICC).

(a) Culture: According to Hammer (2012), cultural groups are typically defined by national and/or ethnic boundaries, but they may also represent other affiliations, such as race, religion, or social groups.
(b) Intercultural Competency (ICC): The ability to accommodate cultural differences into one's reality in ways that enable an individual to move easily into and out of diverse cultures and to adjust naturally to the situation at hand (Bennett, 1993). Hammer (2009b; 2011; and 2012) defines intercultural competence as the capability to shift cultural perspective and appropriately *adapt behavior* [emphasis added] to cultural differences and commonalities.
(c) Intercultural or cultural differences: "The differences in rules, behaviors, communication, and biases based on cultural knowledge or values that are different from one's own" (AACU, 2012, p. 15).
(d) Intercultural experience: "The experience of an interaction with an individual or group of people whose culture is different from one's own" (AACU, 2012, p. 15).

(e) Intercultural sensitivity: Sensitivity to the viewpoints of people in cultures other than one's own (Bhawuk & Brislin, 1992) (may or may not involve subsequent behavior).
(f) Worldview: "The cognitive and affective lenses through which people understand and interpret their experiences and make sense of the world around them" (AACU, 2012, p. 15).

For teachers, the definition of intercultural competence is the "ability to effectively respond to students from different cultures and classes while valuing and preserving the dignity of cultural differences and similarities between individuals, families, and communities." (Ladson-Billings, 2001).

Literature Review

During the past 20 years, researchers have looked at the development of intercultural competence, its consequences, and its implications for individuals and groups. Other studies have examined the development of ICC for pre-service teachers. A review of relevant literature sheds light on the beginning ICC orientations among pre-service teachers and the potential impact of various teaching methodologies (such as multicultural education courses, multicultural immersion experiences, and self-awareness and reflections).

Beginning ICC Orientations among Pre-Service Teachers

Following positive developmental theory, these investigators sought to understand the literature related to the beginning ICC orientations among pre-service teachers. Knowing the developmental stages of incoming students will provide university instructors (and the students themselves) with a starting point for multicultural education.

Guo, Arthur, and Lund (2009) examined the intercultural competency of pre-service teachers. Data was collected from responses by white female students to case studies, journal entries about critical incidents, focus group interviews, and written questionnaires. The investigators reported that the pre-service teachers' understood diversity as within the "other" and not about themselves in addition to the "other." The subjects expressed the beliefs that diversity involved cultural festivals, food, costumes, games, and celebrations. When students were challenged about how to accommodate their teaching to the children's diversity, they requested a formula about how to respond to diversity in their teaching practices. The researchers noted a continuing disconnection between theories of multicultural education and the pre-service teachers' educational efforts.

One explanation of this disconnection was illustrated by Sleeter (2001b), who found that white pre-service teachers have little personal diversity experience, knowledge, or understanding. Researchers suggested that undergraduate university students begin their studies with worldviews consisting of stereotypical beliefs and little knowledge of racism, discrimination, and structural inequality.

Carter-Merrill (2007) focused on the relationships between students' background characteristics, precollege experiences, college experiences, and the development of ICC, as measured by a survey, the Intercultural Development Inventory (IDI; Hammer, 2009a). Activities thought to contribute to higher levels of ICC included: study abroad, participation in discussions, relationships with people different from self, exposure to a diverse campus (especially international students), community engagement and involvement, and participation in a student media organization. Fraternity or sorority memberships were found to have had a negative influence on the development of ICC. However, the investigator concluded that significant characteristics and experiences seemed related to minimal student growth within ethnocentric stages of cultural orientation. Few students in Carter-Merrill's study shifted beyond the minimization orientation to deeper understanding and acceptance of cultural differences and similarities.

Riley (2007) addressed the connection between ICC (as measured by the IDI) and students' college experiences (measured by the Community College Survey of Student Engagement; CCCSE, 2005). There was a strong correlation between IDI scores and CCSSE measures of active and collaborative learning, academic challenge, student-faculty interaction, and student effort. A weaker correlation was found between IDI scores and the CCSE measure of support for learners. There were few meaningful differences between any of the subgroups (gender, ethnicity, full-time status, first-generation status, and length of time in college) when related to the students' engagement and intercultural competence. Riley reported that student respondents thought their intercultural competence was related to group work contributions, international events, sharing of traditions, a diverse faculty and student body, and opportunities for study abroad.

Middleton (2002) explored the attitudes, beliefs, and commitments of a predominantly white population of pre-service teachers. The Beliefs about Diversity Scale (Pohan & Aguilar, 2001) was used as a pre- and post-test measure of self-reported attitudes and beliefs about diversity before and after participation in a diversity course. Many pre-service teachers claimed that they were willing to teach from a multicultural perspective, but at the same time, they misunderstood

and misinterpreted multicultural education, diversity, and the attitudes and skills needed for successful cross-cultural teaching. Middleton made a case for providing structure for individuals and groups to explore and discuss experiences related to multicultural education.

Impact of Various Teaching Methodologies

Of course, teacher educators and the broader American culture do believe that training and experience can affect the development of any skill or disposition, including that of intercultural competency. Black and Mendenhall (1990), Bhawuk (1998), as well as Altshuler, Sussman, and Kachur (2003) have presented arguments to support this belief.

Several recent investigations have explored how teaching methodologies influence the cultural competency of undergraduate students. These mixed-methods studies have highlighted various activities which appear to contribute to cultural competency, including class discussions (Carter-Merrill, 2006) and relationships with people different than one's self (Carter-Merrill, 2006; Paige, Jacobs-Cassuto, Yershova, & DeJaeghere, 2003). The reported experiences have been embedded within several formats that may be categorized as: (1) multicultural education courses, (2) multicultural immersion experiences, and (3) self-awareness and reflections.

Multicultural education courses. Since the mid-1970s, teacher licensure programs have required teacher candidates to complete orientation and training in multicultural education. Traditionally, such courses included opportunities to learn *about* persons in cultures differing from those of the pre-service teachers.

In the mid-1990s, researchers (Garmon, 1998; Zeichner et al., 1998) examined the consequences of multicultural education courses for pre-service teachers. They concluded that multicultural education courses had not had much effect on teacher practices. Even after completing the course, pre-service teachers had negative beliefs and low expectations of success for minority students in elementary and secondary schools. Garmon (1998) posed the idea that multicultural courses actually reinforce low expectations by reporting historic lack of success for minority students. Zeichner and colleagues (1998) suggested pre-service teachers need to experience instructional strategies that require higher order thinking, such as synthesis and application. They recommended that pre-service teachers should examine their own beliefs, reconsider their own assumptions, understand the values and lives of others, and increase their skills in cultural competency.

Dahlman, Hoffman, Cunningham, and Jesseman (2009) enhanced a course in human relations (required for their pre-service teachers) with opportunities for students to reflect on their own cultures, read narratives from other cultures, listen to "others" in panel presentations, develop their own communication skills, and participate in experiential learning with other students. After analyzing the student reflection papers, they concluded that the students increased in self-awareness and in empathy for others through this process.

Multicultural immersion experiences. Houser (2008) investigated an educational approach designed to promote critical consciousness and multicultural understanding among undergraduate and graduate students in teacher education. The cultural immersion approach, which the author referred to as a "cultural plunge," involved intense exposure to social and cultural settings in which the students' norms are clearly in the minority. Initial encounters were followed by personal reflection and subsequent small-group and whole-class analyses. The report suggested that such an approach may provide opportunities for critical growth and multicultural development.

Keengwe (2010) examined the impact of multicultural immersion experiences with adult English language learners on the cultural competency of pre-service teachers. This field experience appeared to be a key factor in an otherwise typical multicultural course that included activities such as reflective writings, cultural films, experiential learning activities, discussions, role play exercises, storytelling, case studies, research presentations, and quizzes. After only ten hours of cross-cultural interaction, the university students reported in logs, reflection papers, and class discussion that they understood better the importance of the cross-cultural experience in helping them become knowledgeable about other cultures, reduce bias, develop respectful skills, and become more accepting of the "others."

Other instructors have investigated the results of incorporating service learning into their teacher education programming. Connor (2004) and Li and Lal (2005) found that student attitudes about diverse communities became more positive after participating in course-related service projects.

Reyes and Bishop (2005) described the concept of partnership between a teacher preparation program and an urban after-school program. Their design included predominantly white undergraduate students in an experience working with children from culturally diverse backgrounds. Grounding teaching in this belief acknowledges the importance of having pre-service teachers examine their identities and their values in relation to a new set of experiences or exposure to new ideas that they gain in their education program. The problem then becomes, how do the instructors incorporate multicultural discourse that defines culture and identity in complex ways, critical of the tourist approach (Hoffman, 1996), and that de-centers the perspectives of mostly white students?

Vaughan (2005) studied the impact of a short-term cultural immersion experience on pre-service teachers who were enrolled in a cultural diversity class. According to the investigator, the students' reflections and oral responses indicated that this experience helped them to be more culturally aware. The experiences also influenced them to seriously reflect on their prejudices, misconceptions, and stereotypes about minority groups. Students reported that they were personally convinced to make positive changes toward cultural diversity if they were going to be culturally responsive in their daily lives and as teachers in their future classrooms.

Self-awareness and reflection. Guo, Arthur, and Lund (2009) suggested the importance of self-examination and self-reflection for the growth of cultural competency among pre-service teachers.

Faculty members who teach multicultural courses often incorporate personal narrative and reflection into the course experience. Schmidt (1998) suggested enhancing any course with the "ABCs Model of Cultural Understanding." In this design, the instructor would include assignments that feature students writing: (a) autobiographies; (b) biography of a person different than the writer; (c) cross-cultural analysis of similarities and differences between (a) and (b); and (d) analysis of differences, along with an explanation of comforts and discomforts. In a home – school relations course, students were assigned to write a plan for communications between school and home, with special attention to communicating across culture, thus providing structure to discuss multicultural education.

Fuller and Pikes (2010) used a multicultural course to enhance the self-awareness of pre-service teachers about their own beliefs, culture, and biases. This "Cultural Self-Analysis Project" was embedded in a five-week course, Parent Involvement in Education. After analyzing the reflection papers and questionnaire responses, the investigators found that pre-service teachers reported increased cultural self-awareness, awareness of their own biases and prejudices, awareness of the influences of their families of origin, and challenges about the need to respect and respond to values different than their own.

Garmon (2004) concluded that self-reflection on one's own belief system is a key factor related to growth in pre-service teachers' cultural competence. He suggested that self-reflection relates to being willing and able to think critically about one's own beliefs, values, and attitudes. Other factors listed were personal beliefs, professional beliefs, intercultural experiences, and educational experiences.

Cross, Bazron, Dennis, and Issacs (1989) posited that effective cross-cultural teaching would include these elements: self-awareness, knowledge of students' home cultures, awareness and acceptance of differences, understanding dynamics of differences, and ability to adapt teaching skills to meet student cultures.

Purpose and Theoretical Framework

Purpose

The purpose of this study was to examine changes in cultural competence among undergraduate students who participated in intensive and intentional cross-cultural experiences. The hypothesis was that the intensive, intentional, and reflective cross-cultural experiences will have a positive impact on the cultural competency of students who complete a course, Human Relations in a Multicultural Society.

The investigators wished to understand the entering and concluding levels of cultural orientation for university students early in their pre-service teacher education programs. Faculty members will use the outcomes of this study for program design, outcome assessment, and course modification. The research questions were related to undergraduate students:

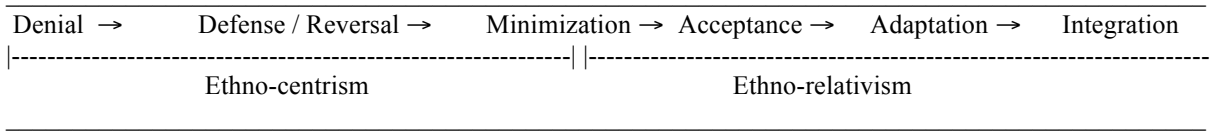
1. What are the cultural orientations of students who register for an undergraduate general education course in human relations in multi-cultural environments? Are the cultural orientations (perceived and developmental) statistically the same for students at the beginning of each semester?
2. Was there any statistically significant difference between the means of pre-instruction and post-instruction scores in undergraduate students' cultural competency in an intentional, multicultural relations experience during Fall 2010 compared to Fall 2011?

Theoretical Framework

From the perspective of a process of developmental learning and in an effort to establish a basis for in-country intercultural education, this study focused on the entry-level cultural competence of university students. To further the understanding of the effectiveness of teacher preparation programs, this study sought to establish a statistical picture of intercultural competence for students at the beginning of their professional education studies.

The study reported herein was based on the Developmental Model of Intercultural Sensitivity (DMIS), originally described by M.J. Bennett (1986; 1993) (see Figure 1). With concepts from cognitive psychology and constructivism, Bennett described ICC as "the way a person understands, feels about, and responds to cultural differences." The DMIS presented predictable stages through which people progress as their cultural competency increases. The DMIS includes two main categories: ethno-centrism and ethno-relativism.

Figure 1
Developmental Model of Intercultural Sensitivity



Note. Hammer, Bennett, & Wiseman, 2003, p. 424

Ethno-centrism is characterized by belief that one's culture or ethnic group is superior to all other groups. This category includes stages of *Denial*, *Polarization* (*Defense/Reversal)*, and the ethno-centric half of *Minimization*. Individuals in stage one, *Denial*, see their culture as the only real culture and (intentionally or not) limit their exposure to cultures different than his or her own. They may acknowledge more observable differences (such as food or costume), but they are unmindful of more profound cultural differences (such as attitudes toward time). Individuals in stage two, *Polarization* (*Defense/Reversal)* may take an uncritical view toward their own cultural values and practices or take an uncritical view toward the cultural values and practices of other persons. This stage is characterized by the sorting of people into "us and them." Differences may be viewed as disruptive and intimidating. Individuals in the first half of the transitional stage called *Minimization* are still ethno-centric, but they see similarities to their own cultures as they learn about the "other" culture.

Ethno-relativism is characterized by belief that one's culture is one of many different cultures and that one's culture or ethnic group is not superior to the other. This category includes the ethno-relative half of *Minimization*, *Acceptance*, *Adaptation*, and *Integration*. Individuals in the second half of the Minimization are now ethno-relative, but they experience the "other" culture in a more interactive, intercultural way. Individuals in stage four, *Acceptance,* view their culture as just one of the many intriguing cultures in the world. They actually appreciate complex patterns of cultural differences. In stage five, *Adaptation*, individuals are able to take the perspective of the "other." They can and do adapt their behaviors to be culturally appropriate and graceful. In the DMIS, Bennett (1986; 1993) included a stage six, *Integration*. He suggested that, in this last stage, individuals or groups can and do move easily between cultures and adjust naturally to the unique situations and expectations.

Methods

Context

The study was undertaken at Minnesota State University, Mankato, a mid-size public university in the Midwest. In the Fall 2011 term, there were 15,640 students enrolled in undergraduate and graduate programs, according to the Minnesota State University, Mankato Office of Institutional Planning, Research, and Assessment (2012). These students included Caucasian (82%), African American (5%), Asian American (3%), Hispanic or Latino (2%), American Indian (0.4%), Native Hawaiian/Pacific Islander (0.1%), and international students (4%). There were 10% who reported membership in ethnic minority groups. Furthermore, 52% of the students at Minnesota State University, Mankato were female, and 48% were male (Office of Institutional Planning, Research, and Assessment, 2012).

In 2006, Minnesota State University, Mankato amended its graduation requirements to incorporate cultural diversity education and experiences into the general education curriculum. The diversity policy was a commitment to "create an understanding and appreciation of diverse peoples and diverse perspectives; a commitment to create an academic, cultural, and workplace environment and community that develops mutual respect for all and celebrates our differences" (Minnesota State University, Mankato, 2010).

The research reported herein occurred within the Minnesota State University, Mankato College of Education (COE), which includes undergraduate academic majors related to elementary education, secondary education, and special education. COE's mission statement is "to prepare principled professional practitioners who thrive and succeed in diverse environments, promote collaborative and generative communities, and engage in life-long learning" (College of Education, 2011). The COE continues to be committed to preparing its teacher candidates to be highly effective in culturally diverse primary and secondary classrooms. To that end, placements in diverse field experiences were required for all students majoring in education. Beginning in 2009, COE students had the opportunity to spend six weeks in a cross-cultural immersion field experience in Queensland, Australia. Beginning in 2012, COE students could participate in mentorship and study in Costa Rica or United Arab Emirates.

One of the more common anticipated outcomes for teacher preparation programs is enhanced intercultural sensitivity and competency among all graduates. Consequently, stakeholders at Minnesota State University, Mankato are designing domestic experiences that provide quality, affordable, concrete opportunities to build relationship with persons from cultures different than their own. Minnesota State University, Mankato students in teacher preparation programs have been encouraged to participate in intensive and intentional cross-cultural experiences within 100 miles (e.g., service learning experiences, field experience placements, etc.).

Since 2010, faculty members in the Minnesota State University, Mankato teacher education programs have been enhancing a course, Human Relations in a Multicultural Society, which is taught each semester. The course meets several graduation requirements, including qualifications for initial state teacher licensure. The faculty members intend to increase students' understandings of individual and group differences, emphasizing the dynamics of race, gender, sexual orientation, age, class, and disabilities in the history and culture of diverse groups in the United States.

Subjects

The subjects included undergraduate students who registered for Human Relations in a Multicultural Society at the beginning of two Fall semesters during the academic years 2010-2011 and 2011-2012. This course was required for students who majored in elementary education. The course could be substituted for required courses for students who majored in secondary education or special education. Students from other academic specializations also enroll in this course because the course met several general education requirements.

Responses were coded according to students' academic classifications (freshman, sophomore, junior, senior, and graduate). Responses were also coded according to students' academic major subjects (education, other than education, and undeclared). Non-education majors included, for example, journalism, mass communications, pre-professional studies (e.g., mortuary science, veterinary medicine, therapy, etc.), social work, and sports management.

Instructional and Experiential Intervention

The course implemented during this investigation was "Human Relations in a Multi-cultural Society," also known as "Human Relations." Teacher preparation goals for this course included:

a) Increase understanding and appreciation of one's own culture and background.
b) Identify and reflect on personal characteristics, qualities, and experiences with diversity and culture.
c) Reflect on personal pre-judgments about characteristics of other people.
d) Learn to accurately perceive and understand cultures and backgrounds of other persons.
e) Understand the value and principles of developmentally appropriate multi-cultural education and anti-bias education.
f) Understand and reflect on the emotional impact of unfair practices.
g) Practice positive and respectful communications.
h) Create plans to stand up against discrimination.
i) Improve academic writing skills.

This course was intended to provide intensive and intentional cross-cultural experiences within 100 miles. Students self-selected this course from among general education courses; however, this course was required for elementary education majors. Broad parameters for the Human Relations course outlined a 3-credit undergraduate course offered each semester, meeting face-to-face on-campus for 2.5 hours per week for 15 weeks. There was an off-campus component in which students participated in field experiences with service learning. In this writing-intensive course, students were assigned 20 pages of writing, with feedback and opportunity for revision. Within the institution's requirements for general education courses and the accreditation requirements for the specific pre-service teacher education programs, individual faculty members were allowed, even encouraged, to incorporate teaching and learning strategies that they believed would help students meet the intended goals.

For this study, the same professor taught all course sections included in the project. During Fall 2010, the professor implemented the course according to the syllabus on file with the academic department. The strategies for teaching and learning included the following: class meetings (45 hours with speakers, films, panel presentations, discussion, hands-on activities, and writing workshops), completion of five self-assessments (communication style, temperament type, learning style, multiple intelligence, and professional dispositions), self-selected cross-cultural service learning (18 hours), group cooperative research and teaching project, textbook readings from Skilled Dialogue: Strategies for Responding to Cultural Diversity in Early Childhood (Barrera & Corso, 2003), and a closing reflection comment. In Fall 2010, the writing-intensive course also required students to submit seven reflection papers with a minimum of 20 pages: cultural autobiography (2 pages), service

learning (4 pages), temperament type (3 pages), professional dispositions (2 pages), group cooperative research and teaching project (5 pages), and two 2-page papers about various cultural diversity topics.

However, for the next semester included in this investigation (Fall 2011), the professor implemented curriculum revisions that the literature search had shown to have higher impact on the development of students' cultural competency. The strategies for teaching and learning continued to include the following: class meetings (45 hours with speakers, films, panel presentations, discussion, hands-on activities, and writing workshops), completion of five self-assessments (communication style, temperament type, learning style, multiple intelligence, and professional dispositions), the group cooperative research and teaching project, and closing reflection comment. The textbook was changed to *Understanding Human Differences: Multicultural Education for a Diverse America* (Koppelman & Goodhart, 2010). For the cross-cultural service learning (18 hours), the instructor facilitated placements so that students interacted with adults rather than children, who were relatively unaware of their cultures compared to those of the students. The instructor added a cultural partnership requirement. This involved matching course participants with partners from other cultures for 9 hours of interaction. The writing-intensive course now required students to submit five reflection papers, each with a minimum of four pages, on the following: cultural autobiography, self-assessments, cultural partnership, a group cooperative research and teaching project, and service learning.

Variables

The dependent variables were the perceived and actual developmental orientations to cultural difference. Throughout this article, PO stands for Perceived Orientation and DO stands for Development Orientation. The main independent variables in this study were the instructional strategies implemented during each semester of academic study. The independent variables were grouped as "Fall 2010" and "Fall 2011."

Instrument

For this study, the IDI version 3 (Hammer, 2009a) was used as a measure of cultural competency. This study incorporated use of the IDI because of its validity and reliability testing (Hammer, 2011), as well as its suitability for a university classroom-based setting and its ease of use. The IDI consists of fifty Likert-type items composed of statements explaining situational and cross-cultural diversity. The inventory can be completed in a 20- to 30-minute session, either on paper or online. (See Table 1 for sample items from the IDI.)

The IDI results in several scores that describe how the individual or group is oriented toward other cultures. The scores of interest for this investigation included Perceived Orientation (PO) and Developmental Orientation (DO). According to Hammer (2009b; 2011), the PO is how the individual or group rates their own orientation toward other cultures. The DO indicates an individual's or group's primary orientation toward cultural differences and commonalities.

Based on the DMIS, Hammer and Bennett (1998) created the Intercultural Development Inventory (IDI) (see Table 1). The IDI has been demonstrated to be valid and reliable. Correlations with the Scale to Measure World-minded Attitudes (Sampson & Smith, 1957) and the Intercultural Anxiety scale, a modified version of the Social Anxiety scale (Gao & Gudykunst, 1990), supported the IDI's construct validity (Hammer, 2011). In addition, the IDI has demonstrated predictive validity in both organizational and educational settings (Hammer, 2011). Cross-cultural validity testing of the IDI has been extensively conducted with thousands of people throughout the world (Hammer, Bennett, & Wiseman, 2003; Hammer, 2011; Paige et al., 2003). The studies referenced reported that confirmatory factor analysis indicated the following:

a) Bennett's (1986, 1993) basic orientations toward cultural differences reliably describe categories: Denial, Defense, Reversal, Minimization, Acceptance, and Adaptation;
b) The IDI provides an overall Developmental Orientation (DO) scale and an overall Perceived Orientation (PO) scale;
c) The IDI is appropriate for students age 15 or older or individuals with a grade ten reading level;
d) The IDI has strong content and construct validity across culture groups; and
e) The IDI has strong predictive validity toward achievement of diversity and inclusion goals.

Based on the psychometric properties associated with this instrument, its authors have suggested that it is useful for purposes of assessing training needs, identifying interventions aimed at increasing intercultural competence, assisting with the selection of personnel, and evaluating the program. After intervention, the IDI can be used to re-assess the same individual or group to assess effectiveness of interventions.

Table 1
Sample Items from the Intercultural Development Inventory (version 3)

Orientation toward Cultures		Sample Item
1	Denial	Society would be better off if culturally different groups kept to themselves.
2	Defense/Reversal	People from other cultures are not as open-minded as people from my own culture.
3	Minimization	People are the same despite outward differences in appearance.
4	Acceptance	It is appropriate that people from other cultures do not necessarily have the same values and goals as people from my culture.
5	Adaptation	When I come in contact with people from a different culture, I find I change my behavior to adapt to theirs.

Data Collection and Analysis

The administration of the inventory was supervised by the course instructor, who is a "Qualified Administrator" trained and authorized to use the IDI. All data was collected after approval from the Institutional Review Board for research with human subjects.

Respondents completed the IDI online during the third week and during the fifteenth week of each semester (Fall 2010 and Fall 2011). During Fall 2010, students could request a one-on-one meeting to receive and to discuss their own results with the IDI administrator. During Fall 2011, this information was routinely shared in a personal meeting for each student who completed the IDI as a pre-instruction assessment. The individual information was not available otherwise.

The quantitative data were analyzed by the investigator using the established IDI protocols and IBM ® SPSS ® Statistics Version 12.0 statistical analysis software. This study examined the IDI individual and group profiles to determine whether group characteristics were statistically significant. The alpha level for the analysis was set at $\alpha = .05$. Differences were determined to be significant if they were at the $p < .05$ levels.

Results

Sample

Table 2 shows the number of research subjects who completed pre-instruction assessments, post-instruction assessments, and both assessments for Fall 2010 and for Fall 2011. For Fall 2010, data was collected from 77 respondents during week 3 and from 56 respondents during week 15; 50 respondents completed both the pre-instruction and the post-instruction assessments in Fall 2010. For Fall 2011, data was collected from 86 respondents during week 3 and from 71 during week 15; 68 respondents completed both the pre-instruction and the post-instruction assessments in Fall 2011. Some students dropped the course after week 3, some students were absent from one or both class meetings where respondents completed the IDI, some data was incomplete or not identified, and some students did not complete both pre-instruction and post-instruction assessments.

Sample characteristics. Table 3 describes the demographic characteristics according to data collected at the beginning of each semester**.** Of the total 163 who completed the survey at week 3, 77% were female and 23% were male. Furthermore, 142 (87%) were between 18 and 21 years old; 19 (12%) were between 22 and 30 years old; and 2 (1%) were age 31 years or older.

Of the students who responded to the question about membership in an ethnic minority group, 6 (4%) considered themselves to be ethnic minorities in their home country. Of the students who answered the question about citizenship, 152 (93%) were citizens of the USA. Of the students who reported where they spent their formative years (between birth and age 18 years), 138 (85%) said they grew up in North America.

Table 4 presents the academic classification and academic majors of 163 of the students at the beginning of each of the two semesters. At the beginning of the two semesters, 2% of the respondents were classified (according to the number of credits completed) as freshmen, 36% were classified as sophomores, 44% were classified as juniors, and 13% were classified as seniors. At the beginning of the two semesters, 47% were education majors and 22% were undeclared. The remaining 30% represented students in a variety of non-education majors, for example, journalism, mass communications, pre-professional studies (e.g., mortuary science, veterinary medicine, or therapy), social work, and sports management.

Beginning Orientation of Undergraduate Students Toward Cultural Differences

The first research question was: What are the cultural orientations of students who register for an

Table 2
Number of Research Subjects, Fall 2010 and Fall 2011

Semester	Pre-instruction (week 3)	Post-instruction (week 15)	Completed Pre-instruction and Post-instruction
Fall 2010	77	56	50
Fall 2011	86	71	68
Total	163	127	118

Table 3
Demographic Characteristics of Research Subjects at Beginning of Fall 2010 and Fall 2011

	Fall 2010		Fall 2011		Total	
	N	Percent	N	Percent	N	Percent
Responses	77	100	86	100	163	100
Female	60	78	66	77	126	77
Male	17	22	20	23	37	23
18 – 21 years old	68	88	74	86	142	87
22 – 30 years old	9	12	10	12	19	12
31 years old or more	0	0	2	2	2	1
Never lived in another country	70	91	68	79	138	85
Lived in Central/South America	1	1	0	0	1	< 1
Lived in Africa	1	1	1	1	2	1
Lived in Asia – Pacific	0	0	1	1	1	< 1
Lived in Middle East	1	1	1	1	2	1
Lived in Europe	0	0	1	1	1	< 1
Identified as ethnic minority	0	0	6	7	6	4
Citizenship: USA	73	95	79	92	152	93

Table 4
Academic Classification and Academic Major of Students at the Beginning of Each Semester

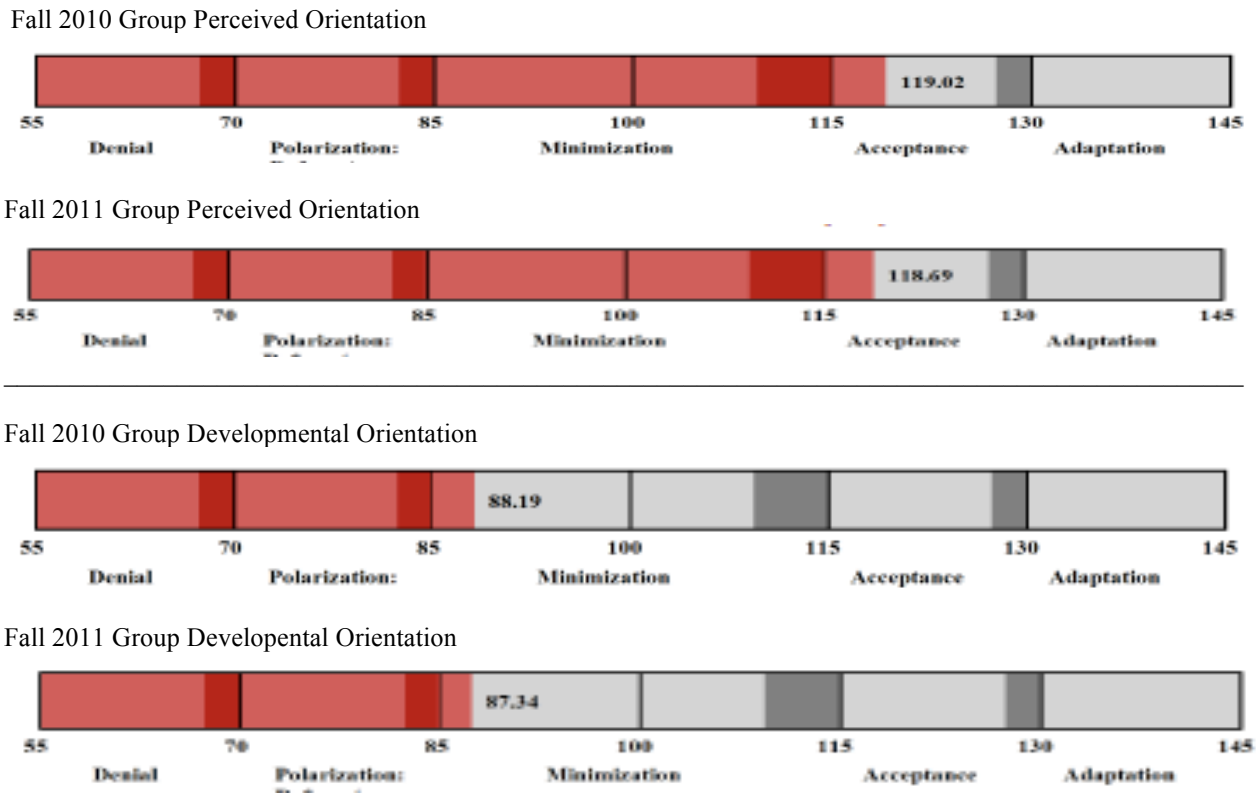
	Fall 2010		Fall 2011		Total	
	N	Percent	N	Percent	N	Percent
Total	77	100	86	100	163	100
Freshman	2	3	2	21	4	2
Sophomore	37	48	22	26	59	36
Junior	28	36	44	51	72	44
Senior	10	13	11	13	21	13
Other	0	0	7	8	7	4
Education major	35	45	42	49	77	47
Non-education major	19	25	30	35	49	30
Undeclared major	23	30	14	16	36	22

undergraduate general education course in human relations in multi-cultural environments? Are the cultural orientations (perceived and developmental) statistically the same for students at the beginning of each semester?

According to the baseline IDI assessments taken at week 3 of both semesters, the perceived orientation score indicated that the group members rated themselves (see Figure 2) as able to recognize and appreciate patterns of cultural difference in values, perceptions, and behaviors (the IDI orientation called *Acceptance*). In contrast to the students' perceptions, the developmental orientation score indicated that both groups were characterized by a primary orientation toward cultural differences that was actually within a low *Minimization* category.

In examining the developmental orientation scores more closely (see Table 5), it was evident that 95% of

Figure 2
Fall 2010 and Fall 2011 Group IDI Profiles for Intercultural Sensitivity



Note. Hammer, 2011, 2012

Table 5
Developmental Orientations of Undergraduate Students at the Beginning of Fall 2010 and Fall 2011

	Fall 2010 (pre)		Fall 2011 (pre)		Fall 2010 & 2011	
Cultural Orientation	Number	Percent	Number	Percent	Number	Percent
Denial	9	12	12	14	21	13
Polarization	21	27	27	31	48	29
Minimization	43	56	44	51	87	54
Acceptance	2	3	3	3	5	4
Adaptation	0	0	0	0	0	0
Total	77	100	86	100	163	100

the students were actually in ethno-centric orientations toward cultural differences and similarities. More than half (53.5%) of the respondents were in *Minimization* orientation. Another 42% of the respondents were in either *Denial* or *Polarization* orientation.

Table 6 presents the descriptive statistics for each of the groups that were being compared (students' perceived and developmental cultural orientation scores at the beginning of Fall 2010 and Fall 2011 semesters). Students at the beginning of the Fall semester 2010 had a mean PO score of 119.02 and a mean DO score of 88.19, with standard deviations of 5.11 and 14.34 respectively. Students at the beginning of the Fall semester 2011 had a mean PO score of 118.69 and a mean DO score of 87.34, with standard deviations of 5.41 and 15.02 respectively.

Table 6
Perceived and Developmental Orientation Scores for Undergraduate Students at the Beginning of Two Semesters (for students who completed pre- and post-tests)

	Semester	N	Mean	Std. Deviation	Std. Error Mean
Perceived Orientation	Fall 2010	77	119.02	5.11	.63
	Fall 2011	86	118.69	5.41	.58
Developmental Orientation	Fall 2010	77	88.19	14.34	1.78
	Fall 2011	86	87.34	15.02	1.62

To compare the cultural orientation means for students at the beginning of Fall semester 2010 and Fall semester 2011, an independent samples t-test was run (See Table 7). First, to determine which t-test should be used, Levene's Test for Equality of Variances was run. Both PO and DO scores had *p*-values greater than .05 for Levene's Test for Equality of Variances. Thus, equal variances assumed models were used. According to the data in Table 7, mean PO and DO scores were *not* significantly different for either semester, Fall 2010 or Fall 2011. The hypothesis of equal means was accepted: there were no statistically significant differences in perceived or developmental orientations at the beginning of the semesters.

Changes in Undergraduate Students' Orientations Toward Cultural Differences

The second research question was: Was there any statistically significant difference between the means of pre-instruction and post-instruction scores in undergraduate students' cultural competency in an intentional, multicultural relations experience during Fall 2011 compared to Fall 2010?

Table 8 presents the number and percentage of undergraduate students at each developmental orientation at the beginning and the end of Fall 2010 and Fall 2011. Table 9 presents the descriptive statistics for students in the Fall 2010: students' pre- and post-instruction mean scores for perceived and developmental cultural orientation. Students in Fall 2010 had a mean pre-instruction PO score of 118.58 and a mean post-instruction PO score of 118.55, with standard deviations of 5.13 and 14.47 respectively. Students had a mean pre-instruction DO score of 86.90 and a mean post-instruction DO score of 86.43, with standard deviations of 14.47 and 14.45 respectively.

To compare students' cultural orientation pre-instruction and post-instruction mean scores for the Fall semester 2010, a paired samples t-test was run. The hypothesis of equal means was accepted because the *p*-value was greater than .05. According to the Fall 2010 data in Table 10, mean pre- and post-instruction scores were not significantly different for both PO and DO.

Table 11 presents the descriptive statistics for students in the Fall 2011: students' pre- and post-instruction mean scores for perceived and developmental cultural orientation. Students in Fall 2011 had a mean pre-instruction PO score of 118.67 and a mean post-instruction PO score of 122.97, with standard deviations of 5.12 and 6.59 respectively. Students had a mean pre-instruction DO score of 87.82 and a mean post-instruction DO score of 98.50, with standard deviations of 14.92 and 17.56 respectively.

To compare students' cultural orientation pre-instruction and post-instruction mean scores for the Fall semester 2011, a paired samples t-test was run. The hypothesis of equal means was rejected because the *p*-value was less than .05. According to the data presented in Table 12, mean pre- and post-instruction scores were significantly different for both PO and DO. In particular, students had statistically significantly higher mean post-instruction scores than they did pre-instruction for both PO and DO.

Discussion

The purpose of this study was to examine beginning stages of cultural competency, as well as changes in cultural competency among undergraduate students who participated in domestic, intensive, and intentional cross-cultural experiences. The hypothesis was that the intensive, intentional, and reflective cross-cultural experiences will have a positive impact on the cultural competency of each student who completes a course, Human Relations in a Multicultural Society. Two types of cultural orientations were examined for this study: perceived orientation and development orientation.

The demographics of the respondents reflected the population of today's teachers: female, white/not identified as ethnic minority, U. S. citizens who have never lived in another country. In earlier studies, pre-service teachers reported little experience with diversity (Sleeter 2001b). Characteristics of this study's sample (when compared to the changing demographics of children in public education) reinforce the significance of attempts to foster intercultural competency among teacher candidates.

Table 7
Independent Samples Test, Beginning of Fall 2010 and of Fall 2011

		Levene's Test		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
PO	Equal variances assumed	.42	.52	.37	149	.71	.32	.87	-1.39	2.04
	Equal variances not assumed			.37	142	.71	.32	.86	-1.38	2.03
DO	Equal variances assumed	.41	.53	.35	149	.73	.85	2.42	-3.94	5.63
	Equal variances not assumed			.35	141	.73	.85	2.40	-3.91	5.60

Table 8
Developmental Orientations of Undergraduate Students at the Beginning and Conclusion of Fall 2010 and Fall 2011

	Fall 2010 (pre)		Fall 2010 (post)		Fall 2011 (pre)		Fall 2011 (post)	
Cultural Orientation	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Denial	9	12	5	9	12	14	5	7
Polarization	21	27	23	41	27	31	10	14
Minimization	43	56	25	45	44	51	40	56
Acceptance	2	3	2	3	3	3	15	21
Adaptation	0	0	1	2	0	0	1	1
Total	77	100	56	100	86	100	71	100

Table 9
Pre-instruction and Post-instruction Cultural Orientation Scores for Undergraduate Students Fall 2010 (for students with both pre- and post- scores)

		N	Mean	Std. Deviation	Std. Error Mean
PO	Pre-Instruction	50	118.58	5.13	.73
	Post-Instruction	50	118.55	5.54	.78
DO	Pre-Instruction	50	86.90	14.47	2.05
	Post-Instruction	50	86.43	14.45	2.04

Table 10
Paired Samples Test, Fall 2010

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
PO	Pre-Instruction vs Post-Instruction	.04	5.43	.77	-1.51	1.58	.05	49	.96
DO	Pre-Instruction vs Post-Instruction	.47	13.82	1.95	-3.46	4.40	.24	49	.81

Table 11
Pre-instruction and Post-instruction Cultural Orientation Scores for Undergraduate Students Fall 2011(for students with both pre- and post- scores)

		N	Mean	Std. Deviation	Std. Error Mean
PO	Pre-Instruction	68	118.67	5.12	.62
	Post-Instruction	68	122.97	6.59	.80
DO	Pre-Instruction	68	87.82	14.92	1.81
	Post-Instruction	68	98.50	17.56	2.13

Table 12
Paired Samples Test, Fall 2011

		Paired Differences							
		Mean	SD	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
					Lower	Upper			
PO	Pre-Instruction vs Post-Instruction	-4.30	6.85	.83	-5.96	-2.64	-5.18	67	.00
DO	Pre-Instruction vs Post-Instruction	-10.67	17.85	2.16	-14.99	-6.35	-4.93	67	.00

Data analysis showed that students in both semesters (Fall 2010 and Fall 2011) began their classes at the same levels of intercultural competency. This suggests that university instructors might conclude that sophomores and juniors (without earlier intentional intervention) arrive in classrooms with ethnocentric views that minimize cultural differences between themselves and others.

Statistical analysis showed that students at the beginning of their pre-service teacher education usually overestimate their intercultural competency. They are likely to agree that, "I can look at the world through the eyes of a person from another culture," or, "It is appropriate that people from other cultures do not necessarily have the same values and goals as people from my culture" (Hammer, 2009a). This suggests that undergraduate students perceive that they have achieved a highly developed level of intercultural competence. Statistical analysis revealed that students at the beginning of their pre-service teacher education usually have a developmental orientation toward cultural differences that is more ethno-centric and are more likely to minimize cultural differences and emphasize human commonalities.

In the United States, undergraduate students value the American principle of respecting and "accepting" persons of all cultures and backgrounds: all are created equal. Everyone has equal opportunity. We should treat others as we want to be treated. Holding such values does not necessarily mean that individuals act on those values. However, the students' actual knowledge, understanding, and reflections are not based on life experiences that enable them to actually, deeply understand and accept the other culture and its complexities. University students are in a life-stage in which coming together around commonalities is important for tasks such as succeeding at a career or achieving a university degree. This makes sense because undergraduate students are exploring ways to understand the world, to find their future career paths, and to "fit in" to their future work.

On the other hand, the students may miss opportunities to treat others according to the others' cultural norms and fail to understand their own cultural privileges. Guo, Arthur, and Lund (2009) reported that the pre-service teachers' understood diversity as within the "other" and not about themselves as well as the "other." Diversity to these students involved cultural festivals, food, costumes, games, and celebrations. There is room for a lot of learning as students come to understand their own culture and experiences through knowledge and reflection.

Comparison of the perceived orientation and the developmental orientation revealed that there is a gap between the university students' orientations to cultural differences. Their perceived orientation to cultural differences was in ethno-relative acceptance, while their developmental orientation to cultural differences was in low, ethno-centric minimization. The gap suggests that the students have not yet achieved cultural self-awareness as deeply as they believe.

In addition to starting levels of intercultural competence, this study also examined changes in cultural competency among undergraduate students who participated in domestic, intensive and intentional cross-cultural experiences. The hypothesis was that the intensive, intentional, and reflective cross-cultural experiences will have a positive impact on the cultural

competency of each student who completes a course. The data analysis, however, showed no statistically significant change among students who completed the course in Fall 2010. About half the students progressed positively in their intercultural competence, and about half the students actually decreased in their intercultural competence. The average change was +.47. Results of Fall 2010 appear to echo results of studies in the mid-1990s (Garmon, 1998; Zeichner et al., 1998). These earlier studies suggested that multicultural education courses for pre-service teachers actually reinforced low expectations by reporting historic lack of success for minority students.

For the instructor, this was disheartening. As a result, the instructor examined the course assignments and teaching and learning strategies. See section 3.3 for a description of the structure for Fall 2010. Reflection led the instructor to realize that the course was organized according to the desired outcomes, as if the students were already at ethno-relative stages of orientation to cultural diversity. The instructor examined high-impact activities reported in other literature (Carter-Merrill, 2006; Middleton, 2002; Paige et al., 2003; Zeichner et al., 1998). For Fall 2011, the instructor re-structured the course so that the strategies began where the students were at entry to the course (ethno-centric and early minimization). Teaching strategies and assignments, then, were facilitated to lead students to reflect on their knowledge, values, and experiences.

The data analysis for Fall 2011, showed statistically significant change among students who completed the course. Almost all the students progressed positively in their intercultural competence. The average change was +10.67. Evidently, higher education teaching and learning can incorporate strategies to enhance the students' experience, knowledge, reflection, and subsequent self-awareness.

Conclusions and Recommendations for Future Research

Teacher preparation programs and accreditation organizations have acknowledged need for educators to demonstrate intercultural knowledge, skills, and abilities. Teacher educators are responding to emphasis in higher education to assure that graduates achieve intercultural competence (NCATE, 2008). This study compared the cultural competency of university students before and after participation in domestic intensive and intentional cross-cultural undergraduate courses.

Data analysis showed that undergraduate students began their semesters at the same levels of intercultural competence, with ethnocentric views that minimize cultural differences between themselves and others. Students usually began with overestimating their intercultural competence as ethnorelative. However, their actual developmental orientation toward cultural differences was more ethnocentric. Due to their lack of experience among people of cultures different than their own, they were more likely to minimize cultural differences and emphasize cultural commonalities.

Results after the first semester, which included more traditional research reports and multiple short papers, showed no statistically significant change in students' cultural competence. After a semester with higher-impact activities (e.g., cultural partnerships), subjects showed statistically significant positive gains in their orientations to cultures different than their own. In order to nurture teachers who are culturally competent, teacher educators need to begin at the level of the students' cultural orientations and challenge their subsequent growth.

This baseline data will be used by the College of Education to plan interventions and to evaluate effectiveness of teacher preparation programs. Results will be used by the local university to facilitate strategic initiatives to educate undergraduate students in multicultural diversity. Researchers expect that students at Minnesota State University, Mankato, will show positive gains in overall intercultural competence. The research will provide students and faculty members with a collaborative, critical reflection about culture and education in diverse environments.

The investigator intends that the results will provide valuable data about change among students, thereby paving the way to enhance the ability of university instructional staff to design courses and experiences for students that match their current levels of intercultural orientation. Faculty members can use Minimization as a starting point to conceptualize the content and methodology of TEP. Then faculty members themselves should practice self-understanding and self-reflection on their own cultures. Mentoring provided by the faculty members should lead TEP graduates to enhanced cultural competency, combined with affective commitment so that classroom teachers become increasingly effective in the classrooms, cafeteria, and other school settings. Faculty members may use data from the IDI to develop goals, adopt assessments, document progress, create self-reflection, and design mentor feedback. Future data analysis should collect and analyze data to accomplish the following:

1. Explore the relationship of specific cultural backgrounds among participants (such as gender, ethnicity, or country of origin) and their resulting change (or lack thereof) in intercultural competence.

2. Explore the interaction effects for academic classification and academic major.
3. Analyze quantitative data in IDI subscales, e.g., denial, disinterest, avoidance, defense, reversal, adaptation, and cultural disengagement.
4. Explore the interaction effects for specific instructional activities and changes in cultural competency.

References

Altshuler, L., Sussman, N., & Kachur, E. (2003). Assessing changes in intercultural sensitivity development using the IDI. *International Journal of Intercultural Relations, 27*(4), 387 – 401.

Arthur, N., & Collins, S. (2010). *Culture-infused counselling: Celebrating the Canadian mosaic*. Calgary, Alberta: Counselling Concepts.

Association of American Colleges and Universities (AACU). (2012, November). *Intercultural knowledge and competence value rubric*. Retrieved from http://www.in.gov/che/files/All_VALUE_Rubrics.pdf

Barrera, I., & Corso, R. M. (2003). *Skilled dialogue: Strategies for responding to cultural diversity in early childhood*. Baltimore, MD: Paul H. Brookes Publishing.

Bennett, M. J. (1986). A developmental approach to training for intercultural sensitivity. *International Journal of Intercultural Relations, 10*(2), 179 – 195.

Bennett, M. J. (1993). Towards ethnorelativism: A developmental model of intercultural sensitivity. In R. M. Paige (Ed.), *Education for the intercultural experience* (pp. 21 – 71). Yarmouth, ME: Intercultural Press.

Bennett, M. J. (2004). Becoming interculturally competent. In J. Wurzel (Ed.), *Toward multiculturalism: A reader in multicultural education* (pp. 62 – 77). Newton, MA: Intercultural Resources Corporation.

Bhawuk, P. S. (1998). The role of culture theory in cross-cultural training: A multimethod study of culture-specific, culture-general, and theory-based assimilators. *Journal of Cross-Cultural Psychology, 29*, 630 – 655.

Bhawuk, P. S., & Brislin, R. (1992). The measurement of intercultural sensitivity using the concepts of individualism and collectivism. *International Journal of Intercultural Relations, 16*(4), 413 – 436.

Black, J. S., & Mendenhall, M. (1990). Cross-cultural training effectiveness: A review and theoretical framework for future research. *Academy of Management Review, 15*, 113 – 136.

Carter-Merrill, K. (2006). *Did we make a difference? Contributors to intercultural sensitivity development in undergraduate students*. (Doctoral dissertation). Loyola University, Chicago, IL. (AAT 3243400)

College of Education. (2011). *College of Education mission and conceptual framework.* Mankato, MN: Minnesota State University, Mankato.

Connor, D. B. (2004). The effects of course-related service projects in a child development course. *College Student Journal, 38*(3), 462 – 472.

Council for the Accreditation of Educator Preparation (CAEP). (2013). *CAEP accreditation standards*. Washington, DC: Council for the Accreditation of Educator Preparation.

Council of Chief State School Officers. (2011, April). *Interstate Teacher and Support Consortium. (InTASC) Model Core Teaching Standards: A Resource for State Dialogue*. Washington, DC: Author.

Cross, T., Bazron, B., Dennis, K., & Isaacs, M. (1989, March). *Towards a culturally competent system of care: A monograph on effective services for minority children who are severely emotionally disturbed.* Washington, DC: Georgetown University Child Development Center, CASSP Technical Assistance Center.

Dahlman, A., Hoffman, P., Cunningham, M. & Jesseman, D. (2009). Listening with compassion: Co-creating multicultural awareness through personal narrative and personal encounters with diversity. *Democracy and Education, 18*(2), (n.p.).

Fuller, D. P., & Pikes, T. (2010). An investigation of prospective teachers on dimensions of diversity: Implications for teacher preparation programs. *Journal of Multiculturalism in Education, 5*(2), (n.p.).

Gao, G., & Gudykunst, W. B. (1990). Uncertainty, anxiety, and adaptation. *International Journal of Intercultural Relations, 5*, 301 – 317.

Garmon, M. A. (1998, October). Preservice teachers' learning about diversity: Influence of their existing racial attitudes and beliefs. Paper presented at the meeting of Mid-Western Educational Research Association, Chicago, IL. ERIC ED 452161.

Garmon, M. A. (2004). Changing pre-service teachers' attitudes/beliefs about diversity: What are the critical factors? *Journal of Teacher Education, 55*(3), 201 – 213.

Guo, Y., Arthur, N., & Lund, D. (2009). Intercultural inquiry with pre-service teachers. *Intercultural Education, 20*(6), 565 – 577.

Hammer, M. R. (2009a). *The intercultural development inventory (IDI version 3).* Berlin, MD: IDI, LLC.

Hammer, M. R. (2009b). The Intercultural Development Inventory: An approach for assessing and building intercultural competence. In M.A. Moodian (Ed.), *Contemporary leadership and intercultural competence: Exploring the cross-cultural dynamics within organizations* (pp. 203 – 217). Thousand Oaks, CA: Sage.

Hammer, M. R. (2011). Additional cross-cultural validity testing of the Intercultural Development Inventory. *International Journal of Intercultural Relations, 35*, 474 – 487.

Hammer, M. (2012). The Intercultural Development Inventory: A new frontier in assessment and development of intercultural competence. In M. Vande Berg, R.M. Paige, & K.H. Lou (Eds.), *Student learning abroad* (pp. 115-136). Sterling, VA: Stylus Publishing.

Hammer, M. R., & Bennett, M. J. (1998). *The intercultural development inventory (IDI) manual.* Portland, OR: Intercultural Communication Institute.

Hammer, M. R., Bennett, M. J., & Wiseman, R. (2003). The Intercultural Development Inventory: A measure of intercultural sensitivity. *International Journal of Intercultural Relations, 27,* 421 – 443.

Hoffman, D. M. (1996). Culture and self in multicultural education: Reflections on discourse, meeting in the middle. *American Educational Research Journal, 33*(4), 545 – 569.

Houser, N. O. (2008). Cultural plunge: A critical approach for multicultural development in teacher education. *Race, Ethnicity and Education*, *11*(4), 465 – 482.

Jencks, C., & Phillips, M. (1998). The black-white test score gap: An introduction. In C. Jencks and M. Phillips (Eds.). *The black-white test score gap* (pp. 1 – 51). Washington, DC: Brookings Institution Press.

Keengwe, J. (2010). Fostering cross-cultural competence in preservice teachers through multicultural education experiences. *Early Childhood Education Journal, 28*, 197 – 204.

Koppelman, K. L., & Goodhart, R. L. (2010). *Understanding human differences: Multicultural education for a diverse America*. New York, NY: Pearson.

Ladson-Billings, G. (2001). *Crossing over to Canaan: The journey of new teachers in diverse classrooms*. San Francisco, CA: Jossey Bass.

Li, X., & Lal, S. (2005). Critical reflective thinking through service-learning in multicultural teacher education. *Intercultural Education, 16*(3), 217 – 234.

Losen, D. J., & Orfield, G. (2002). *Racial inequality in special education.* Boston, MA: Harvard Education Press.

Middleton, V. A. (2002). Increasing pre-service teachers' diversity beliefs and commitment. *Urban Review*, *34*(4), 343.

National Center for Education Statistics (NCES). (2013). *Digest of education statistics: 2012*. Washington, DC: Institute of Education Sciences.

National Council for Accreditation of Teacher Education (NCATE). (2008). *Professional standards for the accreditation of teacher preparation institutions.* Washington, DC: National Council for Accreditation of Teacher Education.

Office of Institutional Planning, Research, and Assessment (OIPRA). (2012). *Enrollment by gender and ethnic origin*. Mankato, MN: Minnesota State University, Mankato.

Paige, R. M., Jacobs-Cassuto, M., Yershova, Y., & DeJaeghere, J. (2003). Assessing intercultural sensitivity: An empirical analysis of the Hammer and Bennett intercultural development inventory. *International Journal of Intercultural Relations, 27*(4), 476 – 486.

Pohan, C. A., & Aguilar, T. E. (2001). Measuring educators' beliefs about diversity in personal and professional contexts. *American Educational Research Journal, 38*(1), 159 – 182.

Reyes, C., & Bishop, P. A. (2005). Meeting in the middle: Preparing teachers on predominantly white campuses for diverse classrooms. *Teacher Education and Practice, 18*(2), 137 – 156.

Riley, R. (2007). *Student engagement and intercultural competency in the North Harris Montgomery Community College District*. (Doctoral Dissertation). Sam Houston State University, Huntsville, TX. (AAT 3288395)

Ryan, C. (2013). *Language use in the United States: 2011, American community survey reports*. Washington, DC: U. S. Census Bureau.

Sampson, D. L., & Smith, H. P. (1957). A scale to measure world-minded attitudes. *Journal of School Psychology, 45*(1), 99 – 106.

Schmidt, P. R. (1998). The ABC's of cultural understanding and communication. *Equity and Excellence in Education, 31*(2), 28 – 38.

Sleeter, C. E. (2001a). *Culture, difference, and power.* New York, NY: Teachers College Press.

Sleeter, C. E. (2001b). Preparing teachers for culturally diverse schools: Research and the overwhelming presence of whiteness. *Journal of Teacher Education, 32*, 94-106.

Solomon, R. P., & Levine-Rasky, C. (2003). *Teaching for equity and diversity: Research to practice*. Toronto, Ontario: Canadian Scholars' Press.

Townsend, B. L. (2000). The disproportionate discipline of African American learners: Reducing school suspension and expulsion. *Exceptional Children, 66*(3), 381-391.

Minnesota State University, Mankato. (2010). *Multicultural diversity 2010-2011 bulletin*. Mankato, MN: Minnesota State University, Mankato.

Vaughan, W. (2005). Educating for diversity, social responsibility and action: Preservice teachers engage in immersion experiences. *Journal of Cultural Diversity*, *12*(1), 26 – 30.

Zeichner, K. M., Grant, C., Gay, G., Gillette, M., Valli, L., & Villegas, A. M. (1998). A research informed vision of good practice in multicultural teacher education: Design principles. *Theory into Practice*, 37(2), 163 – 171.

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North-South Collaborations: Learning from a Decade of Intercultural Experiences for Teachers and Faculty in one Mexican and US University Partnership

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This paper focuses on an ongoing international collaboration between two large public universities, one in the US and one in Mexico, through projects in program development, faculty exchange, graduate student/teacher field experiences, student mentoring and joint research in the area of a foreign/second language teaching and teacher development. Insights from the literature on higher education collaboration and teacher exchange are presented, along with an analysis of the characteristics and conditions that have contributed to this particular network of collaborations over a ten-year period from 2004-2014 and still continues today. Consideration is given to ways in which collaborating across diverse cultures is complex and how networks can contribute to teacher learning. We conclude with implications for collaboration, especially in intercultural teacher education, among diverse higher education participants across geopolitical and cultural boundaries.

"International experience is one of the most important components of a 21st century resume." – Dr. Allan E. Goodman, President and CEO, IIE

"Teaching and especially research abroad for faculty is essential to US competence in international studies." -- *Barbara Burn*

Internationalization, a central movement in higher education in the new millennium, has promoted a significant number of policies and projects related to student and faculty mobility, and, increasingly, to university-to-university collaborations. Despite growth in mobility, there is much work to do to create academic exchange opportunities and accessibility. As Goodman of the Institute of International Education (2013) has noted:

> The careers of all of our students will be global ones, in which they will need to function effectively in multi-national teams. They will need to understand the cultural differences and historical experiences that divide us, as well as the common values and humanity that unite us. . .international experience. . .is so vital to career success and deepening mutual understanding.

Within the context of internationalization today, academic and professional exchanges for students, teachers, and other professionals in both the United States and Mexico may be especially critical. The two countries' geopolitical histories and imbalanced relationships have been complicated. Issues of educational opportunity in Mexico and the US are inextricably interrelated. Twenty years after the 1994 North American Free Trade Agreement was signed by the United States, Mexico, and Canada, Mexico continues to struggle to enter the world economy, and the distribution of wealth and access to economic and educational opportunity remains uneven for Mexican youth and families and, increasingly, for many sectors of US society. Meanwhile, millions of Mexicans continue to cross the border into the United States, and US educators and schools struggle to meet the educational, linguistic, and cultural needs of the children from immigrant families. Against this backdrop, exchanges and collaborations involving students, teachers, faculty, and universities may be one of the most important strategies for moving things forward. While the level of academic exchanges and collaborations between the US and Mexico may have looked pathetic as recently as two years ago, in 2014 the number of Mexican students studying in the US rose to almost 27,000, doubling recent numbers. This trend and a number of recent developments underway in both Mexico and the US hold promise in terms of reversing this earlier state of affairs. For example, there has been an increase in funding for scholarships by Mexico's National Council for Science and Technology (CONACYT, Mexico's equivalent of the US National Science Foundation). In 2013 President Peña Nieto, Mexican business leaders, and US Secretary of State John Kerry met to form a Bilateral Forum for Higher Education, Innovation, and Research. The two countries co-signed a letter of intent reaffirming their mutual commitments to increase exchange opportunities for their respective students during Peña Nieto's January 2015 visit to Washington. This latter initiative builds in turn on two promising complementary projects: *Proyecta 100,000*, whose aim is to send 100,000 students to study in US universities by 2018, and President Obama's *100,000 Strong in the Americas*, focused on sending 100,000 US students to study in Caribbean and Latin American countries by the year 2020, while, correspondingly, attracting an equal number of students *to* the US from these areas. Given

the current state of student exchange between the two countries, these goals, however long overdue, are being welcomed enthusiastically, not only by students and higher education institutions, but by all who see international exchanges as a key to furthering intercultural learning and global understanding.

Forging Priorities: Teacher Learning

There are numerous reasons to place teacher development high on the list of priority areas for investment in intercultural exchanges. For one, broad-based commitments to multicultural education that promote social justice and equity for *all* students make intercultural teacher development, research, and supervision areas of not only promise, but necessity. Second, as Burn (1980) and, more recently, Manathunga (2014); Escamilla, Franquiz, and Aragon (2012) and others have noted from their different perspectives, because today's educators need to serve students who are culturally and linguistically different from themselves, educators at all levels play the central role in enabling access to high quality educational experiences for all their students. For these and other reasons, teachers' own intercultural competence—supported by access to dialogue "spaces" for teaching professionals (Chan & Parr 2012; Aguaded, Ruiz & Castellon 2013)—may be especially crucial in our dynamic, diverse societies in the new millennium.

Yet another area of research points to the relevance of teachers' intercultural learning. We refer to the growing body of work on teacher and adult learning over recent decades (Baxter Magolda, 1999, 2001; Baxter Magolda & King, 2012; Kegan, 1982; Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Drago-Severson, 2009). Increasingly, the literature concurs that teachers' long held beliefs and conceptions, whether about immigrant students' abilities to excel or diverse parents' values towards education, guide but also *limit* teachers' openness and susceptibility to new perspectives and alternative practices. As long as traditional approaches to teacher education prevail, with teachers on the receiving end of "delivered" information and top-down instructional prescriptions, substantive, or "transformative," changes in teachers' thinking or practice cannot be assumed. Transformative teaching is associated, among other things, with an educator's participation in new learning communities and opportunities to engage in professional cooperation, discussion, and revision of their beliefs (Brancard & Quinnwilliams, 2012; Brenes Carvajal et al., 2010; Encinas & Thomas-Ruzic, 2007; Trujeque Moreno, Encinas Prudencio, & Thomas-Ruzic, 2015).

Lowenstein (2009) and Butvilofsky, Escamilla, Soltero-Gonzalez, and Aragon (2012) are among those who see the preparation of US teachers to meet the needs of bilingual Latino students as a "demographic imperative." Smith (2005, drawing from the work of Stromquist, 2002) argues that US and Mexico teachers working in issues of language and schooling should be "comparative educators." Noting the power differential underlying educational and other matters between the Mexico and the US, Smith has argued that a comparative educational approach can mitigate the power imbalance by ensuring that educators become familiar with educational reforms and processes going on in both the North and South. Smith used the notion *comparative educator* to discuss specifically two-way immersion programs based on data collected in public schools in the US Southwest; however, we find that the notion is also useful in the broader context of comparative practices, contexts, and responsibilities for educators and educational researchers, and perhaps in other areas with great potential to benefit communities on both sides of the border, e.g., sustainable agriculture and agronomy, ecology, health, and social welfare.

The specific context of this paper is international collaboration in support of teacher development. We report on one specific case: a relationship between two large public universities—one in the US and one in Mexico—which have worked together productively over ten years (2004–2014) and continuing—through projects in program development, faculty exchange, graduate student exchange, student mentoring, and joint research in the area of foreign/second language teaching and teacher development. We describe how the two universities' collaboration grew out of a prior network of university research collaborations and then expanded to include three additional universities—two in Mexico and one, a sister campus, in the US. We outline key processes and discuss insights from the literature on higher education collaboration and teacher exchange. Our analyses offer an account of the characteristics and conditions that have contributed to this particular network of collaborations and its viability over time, and we suggest ways in which networks in general may be keys to sustainable teacher learning. Our discussion would be incomplete without consideration of the very real challenges confronted; the reader will find a relatively in-depth discussion of these. Finally, we conclude with implications for collaboration across geopolitical and cultural boundaries and among diverse higher education participants, in language teacher education and in general.

Background Context of Internationalization Projects in English Language Teaching (ELT) in Mexico

As one might expect, the areas of language teaching and teacher development in Mexico have been characterized by a relatively high level of experience with internationalization projects. As elsewhere, educators in Mexico have sought projects to expand their resources through collaboration with other educational institutions and community partners. Such projects have generally focused on student and faculty exchange and mobility (Ramos, 2000) and on faculty professional development through distance or semi-distance programs. Until recently, most English language teaching (ELT) projects in Mexico were promoted by agencies linked to the governments of the UK, US, or Australia, i.e., *BANA* (Britain, Australia, North America), the native English-speaking areas that have tended to dominate the ELT scene.

Mexicans' English teaching and training collaborations in the 1990s were primarily with the U.K.; in the 2000s Mexico has had increased collaborations with Australia and the US. Traditionally Mexican universities have tended to host or administer transnational programs with these other countries rather than participate academically in their design and implementation. However, in the last decade, due mainly to faculty participation in graduate programs abroad and an interest in forging transnational, North-South conversations, more joint projects based on faculty participation among higher education institutions have begun to emerge (Didou, 2006).

We believe that the collaboration that is the focus of this paper is distinct from most traditional partnerships in the recent past and up to the present, including most US study abroad programs, in terms of the partners' commitments to equity and reciprocity. That is, beyond making one another's university services, facilities, or sponsorship available primarily as a foreign "mooring" for carrying out one's own "exported" program designed with the benefit of one institution's participants in mind, the partnership described here has been characterized from the onset by a commitment to work jointly and reciprocally. Joint work means the partners *co-construct* bi-national tasks, activities, events, and projects that afford students and faculty opportunities to participate in their respective US and Mexico higher education institutions and also negotiate their understandings about learning, language, literacy, teaching, and teacher development. Such tasks and activities, discussed more fully below, have helped to create *transnational* classrooms and other dialogue spaces through, for example, shared classroom experiences in co-taught summer or vacation classes. In these, participating instructors have opened their classes to students from both universities to create bi-institutional and transnational class sessions exploring topics of shared concern, such as the impact of immigration and repatriation on schools and schooling, bilingualism and bi-literacy, oral language practices in each other's schools and countries, and the importance of north-south dialogue among parents, teachers, students, and school administrators. Within classroom contexts that embrace bi-national curricula, participants hone their own intercultural competencies and gain deeper understandings about participants and factors in the educational process, including the roles of the individual, the family, the community, and personal goals and life values.

Initial Collaboration: University of Colorado Denver (CU-Denver) and the Benemérita Universidad Autónoma de Puebla (BUAP), Mexico

A range of projects beginning in 2004 and involving mostly graduate students and faculty of two institutions was made possible initially because of support from the two universities themselves (the University of Colorado and the Benemérita Universidad Autónoma de Puebla), as well as from the Fulbright-Garcia Robles Program and PROMEP (*Programa de Mejoramiento del Profesorado*), Mexico's national program for professional development. Most recently, a project funded by the *Consejo Nacional de Ciencia y Tecnología* (Mexico's National Council of Science and Technology) abbreviated CONACYT, has allowed language researchers from the two universities as well as two additional Mexican universities to collaborate on an investigation of language teacher beliefs.

The initial 2004 project supported a University of Colorado faculty member in a consultative role in the BUAP's Foreign Languages Department to establish a new Master's program in English language teaching (*Maestría en la Ensenanza del Inglés*, or MEI). These efforts were preceded by prior collaborations in the mid-1990s through joint projects between the BUAP and the University of California at San Diego (Nocon, 2006). The BUAP's new Master's program (MEI) was launched with its first cohort of students in September 2005. Subsequently, in 2008, the respective international offices of the BUAP and CU-Denver forged a Memorandum of Understanding, thus helping to spark a series of internationalization projects, key activities and components of which are outlined below. We refer the reader to Escamilla et al. (2009) and Butvilofsky et al. (2012) for articles relevant to a separate partnership in Puebla, Mexico, involving the University of Colorado. This partnership involved at first one, then also a second, local public school in Puebla that hosted CU-Boulder graduate students in elementary classrooms to work with the classroom

teachers in planning instruction for, and teaching, English to the pupils.

2004-2014 Continuing International Projects by CU-Denver and BUAP Faculty Activities and Participation in Teaching and Research

Faculty activities and participation include the following:

- Six (6) University of Colorado (Denver and Boulder) faculty taught summer elective courses involving BUAP and CU students, including Sociolinguistics; Culture of the Classroom; Critical Perspectives on Language, Culture, and Teaching; Language Teaching Lab; Assessment for ESL/EFL; and Materials and Methods of Bilingual Education. These courses featured largely internationalized curricula developed by the instructors and including readings and topics relevant to the educational, pedagogical, sociocultural, historical, and sociolinguistic contexts of both the US and Mexico. On-line course environments were used as archives for course readings and for posting assignments, as well as for ancillary and follow-up communications, project submittals, and instructor feedback/assessments. The courses were credit-bearing and "counted" for the students—as either required or elective courses— towards the requirements in their respective programs, generally in cultural issues in language, literacy, and education. All but one of the courses taught thus far through the collaboration have been at the graduate level.
- A BUAP professor taught a course on children's bi-literacy practices attended by both BUAP and CU students.
- Three (3) funded projects have involved CU and BUAP faculty research teams. The most recent project, investigating teacher beliefs, has involved researchers from two additional universities: the *Universidad de Quintano Roo* and the *Universidad Autónoma de Baja California*. The principal investigator for the above multi-university project was also awarded by her university (Quintana Roo) a three-week research stay under the auspices of the University of Colorado.
- At least fourteen (14) professional conference sessions based on joint and complementary work in the areas of literacy development, professional development, bi-national identity negotiation, and teachers' intercultural learning have been presented by faculty and students from CU and the BUAP. The conferences have included TESOL (International Association of Teachers of English to Speakers of Other Languages), MexTESOL (Mexican affiliate of international TESOL), CoTESOL (Colorado affiliate), TESOL Spain, AILA (International Applied Linguistics Association Conference), FONAEL (*Foro Nacional de Estudios en Lenguas*), The Guanajuato Qualitative Research Conference, and ISCAR (International Society for Cultural and Activity Research). Initially, participation in these conferences was to report on research collaborations among faculty in both universities, with funding for individual participants coming from their respective universities. Over time, more graduate students from both sites have become active in proposing and presenting sessions as well as publishing.
- Collaborators have over 12 publications and one book in preparation.
- BUAP students have completed theses. The University of Colorado author has served on eight BUAP students' MA committees and on one doctoral dissertation committee, and she has co-published with one of these students. She has also served on relevant advisory boards and the Editorial Board of the BUAP Journal, *Lenguas en Contexto.*

Student (Teacher-Learner) Focused Activities

Activities focused on the teacher/learner have included the following:

- Over 200 students from MA cohorts have participated in one of the above courses, as well as one or more bi-national "encounters" with visiting CU students at the BUAP *Facultad de lenguas* campus.
- From 2005 to 2014, fifty MEI graduate students from the BUAP have been hosted in the Denver-Boulder area in one or two-week homestays with local area teachers and families. The sponsoring of these visits constitutes a major component of the commitment on the part of the Colorado faculty. The visiting MEI students travel to Denver during their 10-day spring/Easter break with some funding from the BUAP, and they are housed in the homes of interested Denver local educators. They participate in graduate seminars and visit local bilingual and

other schools and programs. Building on our experience of what seems to be most meaningful and relevant for the students, as well as workable for hosts and university faculty and staff organizers, we have devised a basic schedule that includes an informal welcome reception by a university official, visits to at least two schools and two post-secondary programs, and time for cultural explorations, sight-seeing, and shopping. Approximately 20 of the visiting MEI students attended major conferences in the Denver area, including the American Association for Applied Linguistics and TESOL. Each year's itinerary is slightly different in order to take advantage of available local resources and events. What appears to be a critical element is for university and homestay hosts to serve as *cultural brokers* and for time to be allocated for visiting teachers to talk through their new experiences. Formal and informal debriefs that encourage comparing and reflecting on experiences and impressions help visitors develop finer understandings and interpret the new information and sensations they are encountering. We discuss these last issues further below under *Challenges*.

University of Colorado Students in Puebla

Approximately 20 students from the University of Colorado (Denver and Boulder) have participated in summer courses and seminars together with their BUAP counterparts, and up to 100 Denver/Boulder-area graduate students and teachers have hosted visiting BUAP students in their homes or by hosting excursions. Since 2010, restrictions on university-supported travel to Mexico for security reasons have unfortunately curtailed opportunities for most CU students to travel to Puebla.

A Growing Network of Collaboration

A recent project has expanded the network of collaboration to additional institutions. Funding from the CONACyT Commission (*Consejo Nacional de Ciencia y Tecnología),* Mexico's equivalent of the National Science Foundation, provided support for the project, "*Problemáticas de la investigación en lenguas extranjeras en México*," ("Issues in Foreign Language Research in Mexico"), a grant project housed at the Universidad de Quintana Roo (UQR) in Chetumal. The project design brought together research teams from the (UQR), the Universidad Autónoma de Baja California (UABC, Tijuana), the BUAP, and the University of Colorado: large public universities representing the southern, central, and northern regions of Mexico and the western US respectively. The project has begun to yield a number of MA theses, research papers, and publications on language teacher beliefs and mentoring, areas now considered to be a key to providing relevant, meaningful professional development for teacher scholars (Reyes & Hernandez, 2014; Trujeque Moreno et al., 2015).

"Disturbing" Teacher Beliefs and Practices

Recent studies in the area of teacher beliefs show evidence of beliefs "getting in the way" of new learning. For example, studies about science education show that adequate attention needs to be paid to counter myths or mistaken beliefs about science. In the public health arena, Nyhan and his colleagues (Nyhan, Reifler, & Richey, 2014), studying the effects of social networks and public health warnings, reported that informational messages alone did not change adults' beliefs about (mistaken) medical practices, e.g., that inoculating children may put them at a higher risk for autism and may even be counterproductive. Instead, the researchers observed changes in opinion when the adults had contexts for dialogue in groups and especially with one's close family members and friends. Dialogue in these settings appears to allow individuals to re-negotiate their stances, commitments, and identities safely with trusted others, i.e., change their behavior and views.

Correspondingly, in teacher education and professional development, after decades of considerable investment at federal, state, and local levels in the US and Mexico and elsewhere, questions persist as to if and how the various efforts result in actual changes in what teachers think and do (Chan & Parr, 2012; Brancard & Quinnwilliams, 2012). A significant part of the challenge, it seems, is to create "a climate of receptiveness" (after Malcolm, 1989). For teachers as well as their learners, such a climate is one in which teacher developers strike the right balance between validation and respect for what the teachers already know and do on the one hand and their need to adapt and change and respond to new demands on the other. Do we want to help teachers effectively integrate technology with their middle school students? Is the objective to support teachers' efforts in improving the literacy outcomes for diverse students in multicultural settings? Regardless of the positive changes we want to effect, it is unlikely that we will be able to do so without confidence in teachers' adaptive potential or recognition of their need for critical discussion with understanding peers and mentors. Reporting on his work with teachers in the context of their diverse classrooms in Australia, for example, Malcolm (1989) cautioned against underestimating teachers' and

students' ability to adapt. An *assets-based* approach with teachers that respects and recognizes, but also ultimately "disturbs," teachers' beliefs, may be a necessary condition to real and realistic teacher learning. Meaningful intercultural experiences may be one of the most powerful strategies we can use.

The literature on simulations, international teaching practica, and other field-based experiences is growing (Chan & Parr, 2012; Escamilla, Franquiz, & Aragon, 2009; Mattson, Eilertsen & Rorisson, 2011). Student testimonials speak to key insights that their intercultural field experiences held for them. Below we draw from the Mexican teachers' reports about their 10-day field experiences in Colorado. The excerpts used in the sections below are from previously unpublished data from Hernandez-Sanchez (2009).

Situated Learning: Inside Classrooms and Homes

As discussed above, visits to a range of Denver area schools and other educational programs have been part of the BUAP visitors' activities while being hosted in the Denver-Boulder area. The schools visited tended to vary, depending on the host family's location and school affiliation, logistics, visitor preferences, the school's schedule, and a number of other circumstances. However, one general, agreed-upon priority of the project has been to make available—to each visiting teacher—opportunities to observe a range of types of classrooms and programs.

Teacher 1 visited classes in two middle schools, one with a heavy Latino population, as well as three high schools, an English language center linked to a public university, and an adult basic education class. She later noted,

"Observing different classroom settings make [sic] me notice that learning is not just a student matter. Learning depends on students, teachers, school authorities, parents, and society. . ." Teacher 2 commented on her observation that the economic resources of students and schools matter; this was an aspect of multicultural education both in Mexico and in the United States that she had not been aware of earlier. Similarly, Teacher 6 reflected, "[I benefited from] [s]eeing different classes, and understanding/appreciating ways in which curriculum, resources, other, played a role in the classroom."

The commitment to get teachers into a variety of different settings is informed by the authors' own experiences as well as those reported in the published literature. As much as possible, one wants to mitigate against a tendency for a visitor to go away from an exchange experience with overgeneralized or stereotyped perceptions, for example, having one idea about what *all* Colorado (or all US, or all Mexican) classrooms and schools are like! (See related discussion under "Challenges" below.) Also where possible, visitors' schedules integrated opportunities for them to talk through what they had experienced and what they were trying to process. Often they were able to do this "around the kitchen table," so to speak, with their host teacher and or another household member, and also with one another, as the visitors were housed in pairs and/or otherwise had contact with one another every few days. Additional forums for talk around educational, cultural, or other matters were through joint seminars with Colorado MA student counterparts. Teacher 5 wrote, "Seeing the various contexts (of primary school classes) and talking with MA student counterparts helped me not only learn about these different contexts, but gave me a clearer understanding of my own contexts." The loosely structured conversations involving the Master's students from the two programs—on topics ranging from graduate student issues such as writing academic papers to teacher concerns such as classroom management and parent involvement—proved to be very rich learning settings and opportunities to share and shift perspectives.

Teacher 9 also reflected on his impressions from classroom observations. This excerpt suggests that his observations helped him take into account important contextual considerations beyond the classroom, "Sometimes as teachers we are worried about our classroom and our students, but we forget what needs are beyond our classrooms, our students' needs, and our schools." Teacher 3 wrote that her direct experience of trying "to see, understand, and interpret" what is going on in a culture different from her own was invaluable. Her visit to a class of adult Nepalese and Vietnamese basic English students and the chance she had to witness language teaching and learning in this new setting gave her insights into her own professionalism as an English teacher in Mexico.

A related prominent theme in the written reflections overall was that of feeling connected to a wider world. Visiting teachers wrote about ways in which their own personal and professional worlds had expanded. They noted a sense of validation—as proficient English speakers, as English teachers, and as Mexicans. For example, visitors who accompanied a bilingual early child educator to a parent meeting experienced firsthand Mexican parents' active participation at the school and community levels. They learned about the growing Latino community in the Colorado, which is widely viewed, and appreciated, as hardworking. They were delightfully surprised at being welcomed by US teachers and administrators in Spanish at several bilingual and other schools! With new eyes, they saw the value of students being able to use both the L1 and L2 in the classroom.

These experiences and others helped pull visitors, hosts, and all who became involved in the field

opportunities into a greater North-South bi-national education dialogue that they had not felt part of before. The discovery that Mexican and US teachers share challenges and goals, and also students, was often mentioned as revelatory. Commenting on the openness of the US teachers and institutions to them as visitors, several Mexican teachers noted that they would welcome the chance to reciprocate and offer the same spirit of openness to Colorado visitors in their own classrooms, schools, and homes. At the time of this writing, reciprocal hosting is already underway, with Colorado visitors being hosted in Puebla teachers' classrooms and homes and on field trips to local areas of interest.

Teachers had opportunities to identify with a larger professional community through classroom observations; these in turn appeared to be associated with perspective and identify shifts. Below we discuss findings from Mexican teachers' reflections on their experiences in another context: attending professional conferences.

Learning from Conference Attendance and Participation

While many of the visitors had attended professional conferences prior to their Colorado visit, the experience of being at an international conference in the US was new, and it allowed them to see themselves not only as English teachers from Puebla, Mexico, but also as part of the international ELT professional community. They wrote and spoke about the shared and overlapping challenges and rewards. While on her Denver visit in 2009, Teacher 5 had the opportunity to attend the International TESOL Conference; she noted:

> . . .there we met people from all over the world, English teachers who were from very different cultures and who faced similar problems to ours and who struggle every day [in] very similar situations. Interacting with so many different people makes you understand better intercultural situations and feel more respect for differences.

Teacher 4's sentiments echo those above. Seeing and hearing how researchers across different contexts connected over shared and overlapping methods and concerns was a "highlight" of her experience, one that made her feel more integrated with a larger research community.

In sum, the investments into field based learning experiences through exchange efforts have shown to have big pay-offs, not only in terms of participating teachers' own professional learning and growth, but also in their enhanced sense of professional commitments and responsibilities. Amidst challenges of budget priorities and questions about the value of professional development and the kinds of investments we should be making in higher education and teacher learning through international collaborations, we offer this excerpt from Teacher 10, "I strongly believe this kind of [international exchange] opportunities make teachers improve, grow, and in general appreciate our university but at the same time make us feel more committed to our teaching responsibility."

Projects on the Horizon

Individual and pairs of University of Colorado students have begun to engage in practicum experiences under the sponsorship of the BUAP and thanks to Colorado's Study Abroad structure. Practica in language classrooms in Mexico are a natural follow-up to other intercultural experiences, and in the near future we also hope that BUAP students can take advantage of similar opportunities in Colorado. As Manathunga (2014) discusses, international practica offer a great benefit for *all* participants—not only the practicum teachers themselves, but also their supervisors, host/cooperative teachers, students, and the cooperating institutions. A second aim is to involve BUAP students in practica and BUAP professors in University of Colorado seminars and courses, and both students and faculty in state conferences

Characteristics and Conditions of the Collaboration

We outline below the elements we feel have played the largest roles in helping to *sustain* the relationship over time.

Reciprocity, Equality, Negotiation, and Openness

When faculty members from the two institutions work with one another's students, a number of important things take place. Faculty members who read and assessed one another's students' papers and projects and served on students' thesis committees shared genuine concerns about, and responsibilities for, student learning. Assessments took on greater authenticity because the standards for assessing and evaluating students' were worked out together. Negotiations of this type required careful, respectful dialogue and explicitness that ultimately were seen as benefiting students' projects, including theses.

True reciprocity remains elusive, however. To date, only two BUAP faculty members have joined their Colorado colleagues in the US for conference presentations; no BUAP faculty member has yet served as instructor or co-instructor in any University of Colorado courses or seminars. In contrast, the University of Colorado author and her colleagues have

made bi-annual visits to the BUAP that have involved conference presentations (4), mini-courses (5), and participation on MA and PhD thesis committees. The joint work involved has helped to renew relationships and provide fresh impetus to the ongoing partnership work and involve new players. Six University of Colorado colleagues made academic visits to the BUAP and led short courses and seminars. Elsewhere we have noted that the situation has been reversed as far as student exchanges go. That is, while more University of Colorado than BUAP faculty have taught courses or seminars in Puebla, more BUAP students have visited Colorado and taken part in sponsored activities than have CU students done in Puebla.

Meeting Regularly

Faculty from the two universities have tried to meet at least yearly, often in conjunction with a relevant conference or research meeting. Intermittently, meetings have taken place using distance communication platforms. Meetings compel us to continue to seek to understand and adapt to one another's discourse and conversational styles, especially with regard to communicating critique, expressing disagreement or disapproval, making suggestions, or stating alternatives or preferences. Additionally, distance formats help to ease transitions among different players, for example, when new directors come into play.

Schools Visits

As discussed elsewhere in this paper, visits to Denver area classrooms, schools, and other educational institutions by BUAP students and, correspondingly, visits to Puebla-area classrooms by CU students represent perhaps the most significant commitment to participants in our collaboration. While the numbers of visiting BUAP students in Denver have significantly outnumbered those of CU students in Puebla, an aim to is have roughly equal numbers of graduate students (teachers) from each institution doing visits to the other's campuses each year, as evidence points to robust learning outcomes for those involved (Escamilla et al., 2009; Encinas & Thomas-Ruzic, 2007).

Institutional Agreements

Though the importance of institutional Memoranda of Understanding (MOUs) between two Institutions is often dismissed, having an MOU in place has helped to make this partnership more visible and facilitative of funding for small projects including student support for exchange visits.

Getting final approvals and signatures on the MOU was not straightforward in the least in our experience; numerous drafts were reviewed and sent back and forth between the universities' respective international offices and involved a significant amount of "behind-the-scenes" negotiation. For example, the author from the University of Colorado had to communicate to her International Office the concerns from the Mexico side about the Spanish and English versions not being equivalent. Also, there was confusion to be resolved about the wording "student exchanges" being disallowed by the Colorado side. Low priorities placed on international initiatives by key administrators at CU at the time meant, correspondingly, a slow-moving MOU approval process. At the time of this writing, the renewal MOU document prepared in 2014 and sent by the University of Colorado's International Office to the BUAP has stalled in the BUAP's international office, but there is promise that in 2016, the renewal document will be signed by both universities' official signatories.

Challenges

Negotiating the complex and dynamic processes of higher education institutions involved in collaborative projects has, rightfully, become a subject of study in its own right. The complexities posed by reliance on increasingly distance communications across national and institutional borders cannot be underestimated. More than once through the BUAP and University of Colorado experiences, miscommunications have threatened the sustainability of projects. We capture several of these below.

- One year, the Colorado colleague organized home stays for six to eight visiting teachers from the BUAP to the Denver area, similarly to the prior year. She was then surprised to receive—ten days before the teachers' arrival—travel itineraries for *19* BUAP students. There was a major scramble to arrange the additional the homestays during a period that included Easter Sunday by drawing heavily on the goodwill of friends and close associates.
- A University of Colorado professor and close colleague of one of the authors visited the BUAP and carried out a workshop for their MA student cohort in which he introduced a theoretical framework and concepts from a book he had authored about teacher learning. This professor's work resonated strongly with one of the students ("Josue"), who used it to provide conceptual grounding in his Master's thesis. Josue and his advisor made multiple

attempts to communicate with the Colorado professor, asking him if he would be willing serve on Josue's thesis committee. They received no reply from the professor.

- Some BUAP faculty members maligned the partnership as an "uneven playing field" with unequal footing between the Institutions and among participants. It is true that while the BUAP hosted Colorado Ph.D. faculty and experts, BUAP faculty were not involved in similar activities in Colorado. We note that early on in the collaboration, many BUAP colleagues had their Master's degrees and were working on, but had not yet attained, their Ph.D.

Different and dynamic schedules and policies drive the two institutions and have necessitated careful planning. As institutional and staff changes have occurred, for example, with the turnover of colleagues and supervisors (directors, chairs, and deans) in the two institutions, individuals involved in the collaboration have needed to take care to make the collaboration visible and transparent, as well as to brief these new colleagues on the activities, history, and goals of the collaboration. At the same time, efforts needed to be made to secure their support and input. To sustain relationships over the course of time and through institutional changes, the constraints, needs, and concerns of each need to be communicated (John-Steiner, 2000), and the geo-political dynamics of north-south (Pennycook, 1994; Smith, 2005) recognized. Having shared goals generally means that the participants will need to talk and work through different values and perspectives. Despite these and other challenges in working in diverse partnerships, the work of Manathunga (2014) in Australia on intercultural postgraduate supervision also shows us that as we grapple with one another's assumptions and theories about knowledge and learning, there is the promise not only of teachers' further development, but of a "recovery and further development" of what she has referred to as "Southern, Eastern and Indigenous knowledges…"

Another more practical but not trivial area that will need to be addressed if exchanges are to be facilitated on a larger scale is with tuition fee structures and credit recognition in cooperating institutions. Present structures do not include tuition parity. In the near future, however, we hope that students at both undergraduate and graduate levels and teachers and in pre-service or in-service MA programs working with partner institutions in the US and Mexico will be able to earn transferable/exchangeable credits and meet some program requirements in either partner institution, perhaps along the lines of the Erasmus programs in Europe and drawing from the work of the Bologna Accords.

A final challenge we emphasize is that of mitigating against (especially novice) visitors' inclinations to overgeneralize from their field experiences. As noted above, ensuring that visitors spend time in more than one institution and having time for critical dialogue to "debrief" their experiences are critical. For example, if Puebla MEI visitors' one school visit is to one exceptionally well-resourced, elite Denver high school, they might generalize that context to all Denver, or all US, schools. The same could easily be true if the visitors were to see, for example, just one under-resourced and historically troubled Denver middle school. There is a risk of these visitors' coming away with distorted misunderstandings about US or middle schools in general. Correspondingly, in Puebla, US students might make inaccurate generalizations based on a visit to one exceptionally well-equipped and managed elite private school or to one particularly poor federal school. Our experiences suggest strong support for visitors not only to experience diverse types of schools and school settings, but also to have *opportunities for critical reflection and debrief*. Pre-K-12 schools that BUAP students in Denver have visited include urban and suburban elementary schools, including schools with early childhood centers and bilingual programs, charter schools, and middle and high schools. Additionally, student visits have been to programs such as parent programs offered through a school or district, high-school equivalency programs, intensive English programs, community college ESL labs or classes, university classes, adult basic education/literacy programs, library-based literacy programs, some church-based educational programs, and programs serving migrants. In Puebla, Colorado visiting students have visited corresponding types of institutions and programs.

Conclusions

There are many reasons to be encouraged by, and supportive of, intercultural education opportunities for Mexican and US educators. The collaborations described here grew from few individuals and a succession of directors in two institutions to several hundred student teachers and faculty from programs in five different institutions, as well as the involvement of local teachers, students, and community members. The likelihood appears strong that continued growth and wider participation of the two institutions will ensue. Second, the literature together with specific experiences discussed in the present paper provide strong support for ways to expand participants' intercultural opportunities to gain global as well as local and personal understandings of their roles and

responsibilities. Third, increased attention and funding on the part of the US and Mexican governments' respective strategies, especially since 2013, are an indication of a stronger commitment on national and multinational levels to the promise of internationalization and an awareness that we will be better at facing our shared challenges together rather than alone. The number of Mexican students enrolled in higher education institutions in the US has seen gradual but slow growth over the past 16 years, from 9,000 in 1997 to 14,000 in 2013, but then almost doubling to 27,000 in 2014. Still, this figure represents less than two percent of the more than 800,000 foreign students in the United States at the end of 2014 and beginning of 2015. Finally, there appears to be growing awareness that higher education needs administrators who are themselves culturally competent and aware and thus can help to create systemic supports for faculty and students to collaborate and navigate differences across borders.

As transnational, North-South conversations continue to be forged within the Americas and elsewhere, we anticipate that more joint projects will emerge from wider faculty and student co-participation. We also anticipate seeing the benefits of greater understanding among more participants through their transformative learning in bi-national dialogue "spaces" in which diverse beliefs and practices can be (re)negotiated. We trust that sustained commitments to comparative education and intercultural learning through collaborations across regional and national borders will become more widely recognized as one of the best strategies we have to promote mutual understanding and positive action.

Productive and creative partnerships that foster joint research and student, teacher, and faculty exchanges among diverse higher education institutions, no matter the obstacles and adversity, hold hope and promise, along with challenges, for us all.

References

Aguaded, E. R., & Castellón, E. (2013). La importancia de la formación del profesorado en competencias interculturales. [The importance of teacher training in intercultural skills.] *Revista de curriculum y formción de profesorado*, *17*(1), 339-365.

Baxter Magolda, M. B. (1999). *Creating contexts for learning and self-authorship: Constructive-developmental pedagogy*. Nashville, TN: Vanderbilt University Press.

Baxter Magolda, M. B. (2001). *Making their own way: Narratives for transforming education to promote self-development*. Sterling, VA: Stylus.

Baxter Magolda, M., & King, P. M. (2012). *Assessing meaning making and self-authorship: Theory research and application* (ASHE Higher Education Report, *38*(3)). Hoboken, NJ: Wiley.

Brancard, R., & Quinnwilliams, J. (2012). Learning labs: Collaborations for transformative teacher learning. *TESOL Journal*, *3*(3), 320-349.

Brenes Carvajal, M., Cabral Villegas, L., Delgado Castellanos, I., Encinas Prudencio, F., Salazar, Blanco, M. G., Sánchez Hernández, V., & Thomas-Ruzic, M. (2010). *A resource guide for TEFL mentors and supervisors in Mexico*. Puebla, Mexico: Publication of the Benemérita Universidad Autónoma de Puebla.

Burn, B. B. (1980). Study abroad and international exchanges. *Annals of the American Academy of Political and Social Science*, *449*(1), 129-140.

Butvilofsky, S., Escamilla, K., Soltero-Gonzalez, L., & Aragon, L. (2012). Promoting reflective teaching through simulation in a study in Mexico program. *Journal of Hispanic Higher Education*, *11*(3), 197-212.

Chan, J., & Parr, G**. (**2012, December). *Intercultural teacher education: Challenges and ethical dilemmas on an international practicum*. Paper presented at the Joint AARE/APERA Conference in Sydney, Australia.

Darling-Hammond, L., Wei, R. C., Andree, A., Richardson, N., & Orphanos, S. (2009). State of the profession: Study measures status of professional development. *Journal of Staff Development, 30*(2), 42–50.

Didou, S. (2006, March). Internacionalización de la educación superior y provisión de servicios educativos en América Latina: del voluntarismo a las elecciones estratégicas. [Internationalization of higher education and provision of educational services in Latin America: The voluntarism strategic choices.] Paper presented at the Seminario internacional IESALC –UNESCO Conferencia de Rectores, Panama.

Drago-Severson, E. (2009). *Leading adult learning: Supporting adult development in our schools*. Thousand Oaks, CA: Corwin.

Encinas, F., & Thomas-Ruzic, M. (2007). Collaborating across diversity: Rewards and challenges. In the Proceedings of the *1st FONAEL (Foro Nacional de Estudios en Lenguas) Conference*. Chetumal, Q. Roo, Mexico.

Escamilla, K., Franquiz, M., & Aragon, L. (2009). The transformative potential of study in Mexico for Bilingual/ESL teachers. *Journal of Latinos and education*, *8*(4), 270-289.

Hernandez-Sanchez, V. (2009). [MEI student journals and focus group discussions regarding their Colorado experiences]. Unpublished raw data.

Institute of International Education. (2013). Open doors 2013: International students in the United States

and study abroad by American students are at all-time high [Press release]. Retrieved from http://www.iie.org/Who-We-Are/News-and-Events/Press-Center/Press-Releases/2013/2013-11-11-Open-Doors-Data

John-Steiner, V. (2000). *Creative collaboration*. Oxford, England: Oxford University Press.

Kegan, R. (1982). *The evolving self: Problem and process in adult development*. Cambridge, MA: Harvard University Press.

Lowenstein, K. L. (2009). The work of multicultural teacher education: Reconceptualizing white teacher candidates as learners. *Review of Educational Research*, *79*, 163-196.

Malcolm, I. G. (1989). *Invisible culture in the classroom: Minority pupils and the principle of adaptation.* In O. Garcia & R. Otheguy (Eds.), English across cultures, cultures across English: A reader in cross cultural communication (pp. 117-137). New York, NY: Mouton de Gruyter.

Manathunga, C. (2014). *Intercultural postgraduate supervision: Reimagining time, place and knowledge*. New York, NY: Routledge.

Mattson, M., Eilertsen T. V., & Rorisson, D. (Eds.) (2011). *A practicum turn in teacher education*. Rotterdam, The Netherlands: Sense Publishers.

Nocon, H. (2006) The diffusion of the Fifth Dimension. In Cole, M. (Ed), *The Fifth Dimension: An after-school program built on diversity* (pp. 160-170). New York, NY: Russell Sage Foundation.

Nyhan, B., Reifler, J., & Richey, S. (2014). The role of social networks in influenza vaccine attitudes and intentions among college students in the southeastern United States. *Journal of Adolescent Health*, *51*(3), 302-304.

Pennycook, A. (1994). *The cultural politics of English as an international language*. New York, NY: Longman.

Ramos, G. (2000, January 15). *Internacionalización de la educación superior. [Internationalization of higher education]*. Paper presented at Primer Encuentro Docente. Educación Superior: Retos y Perspectivas, Universidad del Valle de México, México DF, México.

Reyes, M. R., & Hernandez, E. (2013). Quintana Roo. In J. L. Ramirez (Ed.), *Una decada de buzqueda: Las investigaciones sobre la ensenanza y el aprendizaje de lenguas extranjeras en Mexico* [*A decade of research: Research on the teaching and learning of foreign languages in Mexico*] (pp. 171-208). Mexico City, Mexico: Pearson.

Smith, P. H. (2005). Socio-cultural processes in two-way immersion education. *Lenguas en contexto*, *2*, 15-21.

Stromquist, N. P. (2002). Globalization, the I, and the other. *Current Issues in Comparative Education, 4*(2). Retrieved from http://www.tc.columbia.edu/cice/articles/nps14 2.htm

Trujeque Moreno, E., Encinas Prudencio, F. & Thomas-Ruzic, M. (2015.) Exploring authorship development among Mexican EFL teacher-researchers. *PROFILE Issues in Teacher' Professional Development*, *17*(2), 43-62.

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Helping Students to Succeed in General Education Political Science Courses? Online Assignments and In-Class Activities

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The inclusion of supplemental online assignments and in-class active learning activities can lead to greater levels of student engagement and learning. Students reported that they were more engaged in the classroom and felt that both helped them in exam preparation. Both were also shown to have positively affected student performance and, perhaps most hearteningly, seemed to have had the greatest impact on lower achieving students.

On many college and university campuses the Introduction to US Government and Politics course is traditionally delivered as a lecture, often in a large auditorium. Class usually begins with a few late arriving students searching for seats. Most of the light in the room is provided by hanging projectors emitting images of lecture slides onto screens. As the last stragglers sit down, the lecturer checks the microphone by tapping it and proceeds to pick up where the last lecture left off. The students sit passively, only half listening, but they dutifully take notes when the lecturer advances to the next slide. The sounds in the lecture hall are usually the clacking of keyboards, the hushed whispers of side conversations and, as the end of class approaches, ominous groans when a new text-filled slide appears.

This is environment that many public (and private) colleges and universities place many of their first year students, in many ways their most challenged students, who are trying to juggle a new living environment, new personal responsibilities and freedoms, and new academic demands. The situation is further exacerbated by the fact that many of them come poorly prepared for college and that most would benefit from courses to help them improve their study skills. I was recently assigned a mid-afternoon large lecture class, and I wanted to change my approach to the class for two important reasons. Firstly, students often approached this required course with a mixture of apathy and resentment. Secondly, our university's administration was encouraging the department to (re)consider the course's delivery in light of its low success rates. This article will examine the effects of two changes to my Introduction to US Government and Politics course and seek to answer the following question: can incorporating online assignments and adding numerous in-class activities improve student engagement and learning?

What Is To Be Done?

The questions of retention and completion have become important ones for colleges and universities across the nation as they hope to instill in their students the skills to advance through their studies and graduate (close to) on time. At my university the retention rate fluctuates around 65%, which is below the state average. This also has the effect of helping support the financial situation of the schools that the students attend. This fact has not been lost on the upper administration, where budget concerns have (as in many public and private universities) taken on a new urgency. In several recent meetings on our campus the administration stressed the fact that raising the retention rate was also a faculty responsibility and that if instructors could just "reach out" to a small number of students, maybe as few as 50 across the university, we could meet the state average. Also spurring activity was the fact that my university recently went through the accreditation process (Southern Association of Colleges and Schools, in our case), and our Quality Enhancement Plan (QEP) was centered on the First Year Experience. In preparing the QEP, the university identified certain barrier courses where student GPAs averaged below 2.0 for several semesters. Somewhat surprisingly, most of these courses were found in the "soft sciences," such as sociology, history and political science, rather than in the more demanding "hard sciences."

At many universities administrative mandates often come on short notice and with the demand for immediate improvement, but this wasn't initially the case for us. Last spring the political science faculty that routinely taught the introductory courses (US Government and Politics and State and Local Politics) in our core curriculum were asked to establish a Community of Practice (COP) to brainstorm ways to improve student success. We were given a full year to investigate possible interventions, and we began to strategize about how to introduce more active learning exercises into the courses. But we also wanted to include more developmental skills activities in our courses, such as note taking and exam preparation, as well as to create more out-of-class assignments like take home quizzes or response papers. The faculty also wanted to include other student support organizations on campus as we did have some additional funding for

more supplemental instruction. To further assist the students, we also wanted to involve our campus's Center for Student Success and English Writing Lab.

However, as the spring semester drew to a close, we were "encouraged" by the upper administration to settle on an intervention for implementation in the upcoming fall semester. The faculty was a bit surprised by the acceleration of the timetable, and this led to some quick decision making. Rather than the more expansive course redesign alluded to above, we instead chose to pilot a series of online assignments from the Americans Governing website (http://americansgoverning.com), developed by Soomo Publishing, to supplement the course. One important factor in our decision was the fact that our department uses a common text, *Keeping the Republic*, and the publishing firm had worked closely with CQ Press to develop a companion site. Cost considerations also played an important role in this decision, and we wanted to keep student costs low. The faculty was aware that several different options existed from larger publishers, but we chose to remain with Soomo as several of us had good, albeit limited, experiences using the website. However, while I was confident that the online exercises could enhance student learning, I had less confidence in their ability to generate and encourage student engagement. So thinking again about student attitudes toward the course, I decided to include more in-class activities in the hope that a more active learning environment would also help to improve student engagement and learning.

Literature Review

The relationship between student engagement and student success in the classroom has been well documented, and the discipline of political science has begun to strongly encourage active learning to engage students (Blount, 2006; Elder, Seligsohn, & Hofrenning, 2007; Hunter & Brisbin, 2000; Kirlin, 2002; Perry & Wilkenfeld, 2006). However, when trying to determine why students are successful in the classroom, researchers tended to be fairly prosaic in their conclusions. They have found that prior preparation and knowledge were essential to understanding student success (Cavell & Woehr; 1994; Plant, Ericsson, Hill, & Asberg, 2005; Touron, 1983). Schuman and his collaborators have noted that grades in college were primarily determined by student aptitude and classroom attendance (Schuman, Walsh, Olson, & Etheridge 1985). Their findings were supported by Tiruneh (2007), who found that attendance had a statistically significant impact on student grades and also noted that instructors probably *should* find a way of making attendance some percentage of the final grade. Lin and Chen (2006) have found that cumulative attendance produced a positive and significant impact on students' exam performance and that, not surprisingly, attending lectures corresponded to improved exam performance. Studying helps, argued Diseth (2007), who (also unsurprisingly) found that successful in-class performance was directly related to the amount of time spent studying. However, as Rau and Durand (2000) have found, the real benefit was seen for students studying over 14 hours a week. More traditional classroom activities have also been shown to increase exam performance, such as making notes and study guides available (LaSere Erickson & Weltner Strommer, 1991), encouraging good note taking (Peverly, Ramaswamy, Brown, Sumowski, & Alidoost, 2007), devising in-class exercises that supplement and contextualize homework (Cuadros, Yaron, & Leinhardt, 2007), and having reviews that allowed for the exchange of ideas, encouraged problem solving strategies, and assisted in studying (Huerta, 2004; Shapiro & Levine, 1999).

Despite the growing recognition that active learning fosters student success (Brown, Roediger, & McDaniel, 2014; Reeher & Cammarano, 1997; Simpson & Kaussler, 2009), the vast majority of political science classes are delivered quite traditionally, usually through lecture (Hartlaub & Lancaster, 2008). However, even the most elementary in-class exercises can encourage student engagement and help students gain a basic understanding of political fundamentals and current issues (Colby, Beaumont, Ehrlich, & Corngold, 2007). Reading the newspaper can significantly increase student interest in the political world, enhance their knowledge, and positively influence their attitudes towards community involvement (Huerta & Jozwiak, 2008). While informal class discussion can also lead to engagement, Oros (2007) has argued that structured debates can teach critical thinking skills. Even though some have argued that simulations may not be all they are advertised to be (Kille, 2002; Prince, 2004; Rochester, 2003), or that they need to be better assessed (Grosen & Washbush, 2004), studies have shown that they can increase student engagement (Caruson, 2005; Jones, 2008; Wakelee, 2008), and, as a result, several authors have observed better student performance (Frederking, 2005; Jozwiak, 2013; Shellman & Turan, 2006; Simpson & Kaussler, 2009). The development of civic competence is often an important component of US Government and Politics courses, and Bernstein (2008) has found that the use of simulations can enhance this learning goal and foster skills that can be useful in subsequent classes.

An emerging literature on civic competence and engagement outside of the classroom stresses alternative teaching pedagogies. Taking students out of the classroom and having them view city council

meetings is not only "cool," but also has also led to higher levels of civic engagement (Van Assendelft, 2008). Several studies have shown that service learning exercises fosters improved performance (Ayers et al., 2010; Jenkins, 2008; Saltmarsh & Zlotkowski, 2011; Smith, 2006; Sternberger, Ford, & Hale, 2005). Kiltz and Ball (2010) have argued that service learning is significant because it is an integrative learning strategy which combines meaningful community service with instruction. Linked learning and service objectives that challenge both the student and the community member can lead to tremendously beneficial outcomes. The students learn civic responsibility, and local communities are strengthened. Together with her co-authors, Goss (2010) has found that research service learning experiences allow students to link classroom theory to the challenges faced by organizations in civil society. Dahlberg, Barnes, Bush, and Bean (2000) have argued that service learning projects can also enhance participation and performance in the classroom, especially for students from traditionally underrepresented communities. Taken together, these studies argue that active learning, both in and outside of the classroom, can increase student engagement and improve student learning. And while the studies cited above often look specifically at examples from political science, it is not difficult to imagine their application in other disciplines, such as sociologists linking with local community agencies to engage students in service learning or chemistry classes monitoring local water quality to exemplify key concepts from organic chemistry.

With the advent of new technologies, additional on-line supplemental materials can also positively influence student performance *if* they are used by the students. Orton-Johnson's (2009) study showed that some students are reluctant to use these materials. They trusted the traditional texts as authentic, whereas the newer materials challenged existing learning practices and threatened expectations. Roberts (2008) noted that a considerable number of the students did not use the podcasts intended to help them prepare for exams. More positively, Taylor (2009) has also experimented with podcasts and found that, when combined with other teaching methods, students reported higher levels of engagement with the material. Another advantage of podcasting, argued Taylor, is that it can preserve a high-quality lecture that students can repeatedly listen in order to gain information or further clarifications. And he agreed with Roberts' observation that podcasts did allow for more time to engage with the students in the classroom. Creating on-line discussion forums can foster critical thinking, synthesizing, and applying knowing, which can enhance student learning (Hannafin, Land, & Oliver, 1999). Asynchronous discussion boards can encourage greater student participation because they allow students more time to reflect on their responses (Spiceland & Hawkins, 2002). These boards may also provide an opportunity for students to exercise their voice, an important consideration for students who are more naturally reticent (Li, 2004). Wilson, Pollock, and Hamann (2007) found that reading the online postings from other students and the instructor was most clearly linked to improved course grades. Significantly, this was particularly true for students with lower GPAs. Hamman, Pollock, and Wilson (2009) have found that reading online postings was the key to explaining increased student performance, but responding to posts had only a small impact on grades. In sum, these studies largely agree with the earlier work of Pollock and Wilson (2002), who concluded that an online component might benefit all courses. As was the case with the active learning exercises, the literature on online learning suggests that these actives can benefit student learning. The online supplemental activities suggested above are not discipline specific, so any academic area could use these profitably.

On-Line Activities

At our institution, and I suspect many others, instructors routinely refer students to textbook companion websites. Most large publishers have companion websites for their texts which provide supplemental material including chapter outlines or summaries, flash cards, multiple choice quizzes, and short answer exercises that can assist students in reviewing for exams. Recently, publishers have begun to develop more robust websites that allow include sophisticated homework assignments as well as on-line chats (synchronous or asynchronous) and simulations or role playing exercises. Many also include additional content such as updates on current events or recent research. Our introductory American government course employed the Americans Governing website (http://americansgoverning.com) which had numerous content pieces related to key concepts presented in the textbook chapters. For the *Keeping the Republic*'s introductory chapter the website includes, for example, an excerpt from Locke's *Second Treatise*, a map that traced the spread of democracy, and two newspaper editorials that look at democracy and US foreign policy. The website also includes two videos for the introductory chapter. The first is a thirteen-minute clip that reviews contemporary debates over health care, and the second is a five-minute clip that asks students about what they thought the purpose of government might be. Over the course of the semester students were asked about once a week to do an online exercise designed to support material presented in lecture.

In this course there was a concerted effort to use audio or video clips from the website as supplemental activities. This was done for two reasons. First, there was a desire to add something more dynamic than extra reading in order to lure students into the content. Second, students respond to materials differently, and this would allow them to encounter the material in various types. Over the course of the semester there was a mix of assignments from various formats. For instance, the students watched a video on a local mayoral race in New Jersey to exemplify electoral politics. To help support the classroom discussion of presidential powers, the students listened to several audio clips from the Watergate tapes. In the course's discussion of federalism, the students read the transcripts of the phone conversations between the Kennedy Administration and state officials during the de-segregation of the University of Mississippi, but they were also able to listen to audio clips that helped them understand the *tone* of the back and forth between the two sets of officials. These clips were also useful later in the semester when the class discussed the politics of civil rights. While the presentation of this content was important, several video clips used were interviews with students that revealed their attitudes toward politics, which interested our students greatly. But perhaps most importantly, a few of the video clips showed students *doing* work related to politics such as conducting exit polls during a recent election in Florida.

While the website had a default selection of assignments to accompany each chapter, the software did have a degree of flexibility. Instructors had the option of choosing different assignments in each chapter as well as moving assignments from one chapter to another. Each assignment came with a series of pre-loaded questions, either informed multiple choice or short answer questions. The questions were comparable to those found in test banks that accompany most US government textbooks. It was possible to add questions to target specific concepts that were emphasized in lecture. The advantage of using the short answer option was that it encouraged students to engage in critical thinking and writing, the latter of which has been shown to be vitally important for student success. However, students' written responses must then be downloaded and assessed by the instructor. Given that this was a class of 225 students taught without the assistance of graders or teaching assistants, the multiple choice option was chosen. Once a question has been answered, it could not be changed. Despite numerous faculty warnings about this early in the semester, students often suffered negative consequences for their lack of attention to this detail. However, this eventually encouraged the students to preview the questions, listen/watch attentively, take notes, and then attempt to answer the questions. This pattern of behavior, if consistently followed, helped students develop more effective study habits. As soon as the students were done answering the multiple choice questions, they received feedback.

There were some drawbacks to the multiple choice exercises though. There was always the potential for students to work in groups and share answers. But at the same time if some of these questions, or variations of them, were used on the exam, the chances for student success were lowered if they didn't do the work themselves. Another problem with the software in that particular semester was the fact that it didn't include a close time which ended student access to the questions. This problem was mitigated, however, by downloading a comma separated file from the on-line grade book just after an announced due date and time passed. In this semester the assignments were due at the beginning of class, so I simply downloaded the spreadsheet just prior to heading to class. This took just a few seconds. More recent versions of the publisher's software have resolved this issue, enhancing the functionality of the website. In sum, using these supplemental materials enhanced student engagement in the class by requiring them to think about the content outside of large lecture. These assignments were also small, low stake assignments that, if taken seriously, allowed students to easily accumulate points. They also had the added benefit of helping them prepare for the exams. The advantages of the assignments far outweighed their disadvantages, which were largely related to technical glitches or student learning curves. But each of these can be allayed, either through technical support calls or constant reminders through in-class announcements and online postings in the course software.

In-Class Activities

It is not uncommon for instructors to build up a repertoire of activities with which they feel comfortable and that students find at least moderately interesting. But to avoid student disengagement, or even apathy, described in the introduction, I revised the course's content and created several new in-class activities. Some of these were more traditional, such as reading quizzes, but a few strived to be innovative, such as one-day simulations. Overall, the activities were designed to reward attendance and consistent effort. As in the case of the online assignments, most were low stake activities, worth about 10 points each, but which totaled to the rough equivalent of one exam.

A real challenge in teaching large lecture classes is keeping students caught up with their reading. To help ensure this, one of the activities I used was a reading quiz. Admittedly, this may not be the most innovative teaching tactic, but it can be used profitably in all classes, even in large lecture classes. Over the course of

the semester the students were given four reading quizzes, generally close to an exam, to underscore the importance of reading before the exam. I provided some timely warnings so they were not perceived as punitive pop quizzes. They usually contained ten questions over key concepts. Toward the end of class the quizzes were passed out, and students were given about ten minutes to complete them. However, early in the semester, more time was allotted to the quizzes, where the intention was to turn these quizzes into active learning exercises. After they completed the quiz individually, the students formed small groups and worked through the quiz again. This usually took about five minutes. At this point I asked them to signal their final answer by drawing a star around their choice. Then, as a class, we would walk through the quiz one more time, discussing the answers and considering why some choices were right and what might have disqualified the others. This allowed the students to get more experience with exam-like questions, it encouraged them to read critically, and it modeled the practice of working in groups. While this can take time, it effectively worked as an exam review and, at the same time, allowed the instructor to assess the class's preparedness. Given that the students worked in small groups and were usually able to answer all the questions correctly, the early semester quizzes were graded relatively leniently. However, on successive quizzes the scores moved from taking the group answers to mixing the individual results and the group results. Although the class did spend time discussing the answers on the last quiz, only the individual score was recorded.

Another way to move beyond the lecture is to embed links in a slide presentation, which is a particularly useful way to present photos, graphs, or videos. For instance, in the course's discussion of the Supreme Court, the role of the Warren Court was emphasized in discussions of judicial activism and presidential appointments to the bench. To support the lecture, one slide highlighted the controversial justice by including a photo of an "Impeach Earl Warren" billboard, and another slide pictured Justice Warren and President Eisenhower together. It is now a commonplace to embed video links into lectures to supplement that day's content, but nonetheless the strategic use of videos can also allow for a break from straight lecture. While shorter clips are useful to illustrate a point, they don't allow for much reflection, so longer clips are sometimes more useful. To increase their effectiveness, students were given a short ten question response sheet before viewing the clip. This allowed them to preview the questions and fill in the answers as they watched. A discussion would naturally follow where connections between the video and key concepts were made. In the course's discussion of the Supreme Court, for example, the students watched ex-Justice Sandra Day O'Connor's visit to the *Daily Show* as a way to help explain the operation of the court. The clip was useful in two ways. Firstly, it begins with a discussion of the general population's lack of knowledge about the basics of US government (at which point student learning is "celebrated" because they do know most of these facts). But more importantly, Justice O'Connor then reflects on her time on the bench, discusses how appointments were made, and how the court she served on operated. This is a two-part clip which runs about ten minutes and really helped to contextualize the textbook's discussion of the Supreme Court.

To explain the struggle for civil rights, one can use a plethora of learning tools, including clips of speeches or the "Eyes on the Prize" documentary, but sometimes placing the students in an uncomfortable situation can also be an effective teaching device. In order to have the class consider racism and state power with regard to voting rights, students were given the 1965 Alabama Literacy Test. After they attempt to answer the first 25 questions, the sense of frustration in the classroom was palpable. As with the quizzes discussed above, the class worked in small groups through the 1965 test trying to answer the questions. Very few groups scored well, and the students really began to understand the test's power to disenfranchise. This activity was assessed through participation, but the ensuing class discussion was used to create a question (or two) on the exam, validating the students' participation and reflection.

The above examples were ways to move beyond lecturing by encouraging more student activity. However, the course also presented several opportunities for more truly active learning, including exercises in ideological self-assessment, polling, campaigning, and budgeting. One of the first exercises the class engaged in was participating in the Pew Center's "Where Do I Fit?" ideological survey. This was a short survey (20-25 questions) that placed students/respondents in several categories, ranging from enterprisers (who are fervent believers in the free market) to liberals (who are positive on most things governmental) to upbeats (moderates who tend to be younger and can, for instance, accept the notion that "torture can be a good thing") to disaffected (outsiders who have little interest in politics, little faith in the private sector, and little hope for the future). This tied very well to the chapter that analyzed the ideological composition of American society. The students did the survey online and then came to the class with a printout of their "identity." The students were then broken into their groups so they could physically see the distribution in the classroom. In a large lecture hall with seating split by a central aisle, it was beneficial to have the enterprisers up in one corner and the liberals down

in front at the opposite corner. By splitting these groups up this way, and then distributing the other groups between them, students saw the ideological spectrum and were able to a get a general sense of the distribution of opinions. Usually there was a small group of enterprisers, a smattering of social conservations and pro-government conservatives, a larger group of upbeats, and a significant showing for liberals (this distribution has usually held true over the years, even in more conservative Texas). There were usually a small number of *disaffecteds*. I gave an overview of each group's general characteristics and also reminded them that no one group was better (or worse) than another. The disaffected group was the one group that needed to be treated with care, as they (and everyone else) could see they were the smallest group (which could engender an even greater sense of marginalization). However, in a large lecture environment the groups were usually large enough to allow for anonymity so individual students wouldn't feel isolated or singled out.

When discussing public opinion and polling, another way of getting students engaged in the material was to actually have them construct their own surveys. It was beneficial to have an introductory lecture presenting sample surveys to help students model their own surveys. This was also useful in presenting problems related to polling. In this exercise the groupings from the ideological survey were also used. The students were asked to form ideologically like-minded groups numbering of about ten where they constructed their own surveys. As the instructor I roamed the room in order to encourage groups to avoid very simplistic questions ("Should marijuana be legalized?") and to develop something more sophisticated ("Should 'illegals' be given a path to citizenship through successful military service?"). Students invariably asked whether these questions should be "yes or no" or "something else." I usually responded that they were the pollsters but that they needed to consider the clarity of each of their questions, whether it forced or led respondents and how difficult would it be to tabulate their responses, all problems related to polling. Once the groups developed their ten questions, two students from each group role-played as pollsters (one asked the questions and the other recorded the responses) and surveyed the other groups in the class. The remaining group members sat in their place in the classroom and responded to pollsters from the other groups. The ideological groupings lead to interesting exchanges between groups, including questions such as, "Why are you asking that?," and, "You guys really think that?" In the following class period the exercise allowed an extended discussion on question and sample bias using student generated questions and data. Students who participated learn from the experience, but they were also validated as they saw their questions used as in-class examples. In assessing this exercise, students were given credit for the quality of their work.

Showing campaign ads has been a traditional way of introducing students to electoral politics. It was a real eye opener for students who had seen neither Johnson's "Daisy Girl" ad nor Reagan's "Morning in America" ad, which allowed the class to discuss the advantages (and disadvantages) of negative and positive advertising. The Wisconsin Advertising Project (WAP) (http://wiscadproject.wisc.edu/) has several ads available for viewing and, when combined with the textbook, helped to trace out the history of political advertising. The WAP ads also had storyboards available to go along with the video clips. These storyboards were important as they allowed students to see how ads are planned and the relationship between images and text. They were also useful as models for another in-class active learning exercise. In this class the students were placed in random groups, and each received a large sheet of paper (11x17) with six rectangles and asked to create their own campaign ad. The students brainstormed about potential campaign themes and related images. They were encouraged to take into account the lecture material, but they were also given the freedom to be creative. As with the polling exercise, several student generated ads were presented to the class. These were used to inform discussion on the use of imagery. They were also analyzed for their overall effectiveness. In assessing this exercise, students were given credit for the quality of their work. Groups that worked to develop a theme and used appropriate images were more positively assessed. In a successive semester's State and Local Politics course this exercise was again used, but instead of groups being randomly assigned, the students were grouped based on their ideology. Each group was asked to present two ads, one ad that would appeal to their party's base and another ad that would try to appeal to independents, encouraging them to integrate concepts across chapters.

Unsurprisingly, current events can often be worked into almost any course on politics, which makes the class more relevant to the students. Over the course of the past few years the federal budget has been a source of considerable interest. While several on-line budgeting exercises are available, this class used the "You Fix the Budget" exercise from *New York Times*. This can be done on-line, but the basic elements of the exercise are available by downloading a table for classroom use. The exercise involved filling in a budgetary grid by dictated by taxing and spending options. For instance, students could reduce spending by cutting or reducing Medicare. But they also had the option of raising taxes by raising corporate tax rates or letting the Bush tax cuts expire. To get to the partisan

differences present in any legislature the ideological groupings from earlier in the semester were used. As expected, the liberals were much more willing to raise taxes, the enterprisers much more willing to cut spending, and the more centrist groups willing to consider a greater mix of the two. One of the lessons of the exercise, beyond suggesting that ideology drives a great deal of the debate, was that balancing the budget called for difficult choices and a combination of raising taxes and cutting spending was probably going to be necessary. When roaming the room answering student questions about the implications of cuts ("Who gets hurt by this?"), it became clear that they were clearly interested in the project and really did want to balance the budget while staying as true to their ideology as possible. Stopping by one group of enterprisers who were struggling, I asked what the problem was. "We're going to have to raise taxes. That hurts." It was also clear that these relatively young students were having no problem raising the retirement age and slowing the growth of spending on Medicare as a way to balance the budget. In terms of immediate assessment, the students were given credit for participation; no qualitative assessment was given.

The above examples are clearly most appropriate for political science courses, but the teaching strategies can be usefully applied across all disciplines, where participation and experiential learning lead to student engagement and learning. To a certain extent the point of the exercises was not the ultimate quality of the work generated in that seventy-five minute period, but rather the learning process as students grappled with the course's content. In many ways these in-class activities tried to emulate problem-based learning (Kaunert, 2009) where, moving beyond the traditional classroom experience, students are given the autonomy to work in small groups relatively independently of the instructor to solve complex problems based in real life (Duch, Grohl, & Allen, 2011; McKeachie & Svinicki, 2006; Williamson & Gregory, 2010).

The Sample

The theoretical literature suggests that the in-class activities should have encouraged student engagement in the classroom as well as improved student scores. To test whether the students were engaged in the class, a survey was done at the end of the semester to assess their attitudes on both the online assignments and in-class activities. There were approximately 225 students enrolled in the course. The course met in a large lecture setting that had a capacity of 250 seats. This was a seventy-five minute class that met twice a week at 2:00 in the afternoon. Over 95% of the students were either first or second year students, with a smattering of juniors and seniors. No attempt was made to determine whether there was a difference between the attitudes of the lower and upper division students, nor was any demographic data collected. The students were asked the following questions about both the online and in-class activities: "Did you do the online assignments?," "Were the assignments helpful for lecture?," "Were the assignments helpful for understanding concepts?," and "Were the assignments helpful for exams?" The students were also asked about whether the in-class activities kept students engaged. Finally, the survey asked what grade the student expected to receive in this class. The number of usable surveys was 135, which was significantly lower than the 200-odd students that were in class that day. The lower number was due to the fact that more than a few students did not fill out *both* sides of the survey.

As Table 1 shows, a very high percentage of the students did the online assignments, which was to be expected given that they were graded assignments. It was also interesting that the overall rate of participation was slightly higher for the online assignments than the classroom activities and can be explained by ease of access.

Table 2 reports that students generally found the activities and assignments were helpful in making connections between content found online and in class. The scores for the classroom activities were slightly higher, however.

Table 3 reports that students generally found the activities and assignments were valuable, and, overall, the students felt that both helped them prepare for the exams. These figures were slightly lower than reported for the helpfulness in understanding key concepts. This was an interesting result and was probably due to students expecting a more direct and immediate benefit on the exams.

Finally, Table 4 reports student engagement. The figures for the in-class activities show high levels of student engagement. Nearly 85% of the students felt that these activities kept them engaged in the class. While this particular class was not asked about their engagement as a result of using the online activities, a subsequent class (operating along the same overall course design) was asked this question, and these results are reported in the "Online" column. There was a considerable degree of difference as the students reported far lower degrees of engagement. Clearly there are some severe challenges comparing these two groups, and not too much should be read into these figures, but they do suggest a real difference in levels of engagement.

Indirect measures, such as surveys, can be useful in assessing the degree of student engagement. As shown, students reported that they felt that the in-class activities and online assignments positively influenced their attitude toward the course. They responded that

Table 1
How many times did you complete the activities/assignments?

	In-Class %	Online %
Always	45.9	54.8
Almost Always	40.0	36.3
Sometimes	12.6	5.2
Almost Never	1.5	3.0
Never	0.0	.7

Table 2
How helpful do you feel the activities/assignments were in understanding course concepts?

	In-Class %	Online %
Extremely helpful	25.9	16.3
Somewhat helpful	65.9	60.7
Neither helpful nor unhelpful	4.4	9.6
Somewhat unhelpful	3.7	11.1
Not at all helpful	0	2.3

Table 3
How helpful do you feel the activities/assignments were in your preparations for in-class exams?

	In-Class %	Online %
Extremely helpful	19.3	15.6
Somewhat helpful	62.2	56.3
Neither helpful nor unhelpful	12.6	13.3
Somewhat unhelpful	4.4	8.9
Not at all helpful	1.5	5.9

Table 4
How helpful do you feel the in-class activities were in keeping you engaged in the class?

	In-Class %	Online %
Extremely helpful	45.9	9.92
Somewhat helpful	43.0	40.07
Neither helpful nor unhelpful	5.2	25.79
Somewhat unhelpful	3.0	11.11
Not at all helpful	3.0	13.09

the activities also contributed to learning the material. However, did student learning increase as a result of completing the online assignments and participating in the in-class activities? One way to partially answer this question is to compare exam results of questions taken directly from the online assignments with the overall exam scores. When answering these questions on the exam, students were usually prompted to consider the online activity, so a standard four option multiple choice question would look something like this: "From the Americans Governing assignment on JFK vs. Barnett, Governor Barnett did not abide by the U.S. Supreme Court decision to integrate the University of Mississippi because he thought segregation laws with regards to education were…" and "From the Americans Governing video on local parties, we saw an incumbent advantaged in the usual ways, such as political organization and fundraising, but in the case of Newark an additional advantage was…." The rationale for the selection of each question was a desire to have the students recall key concepts, as is the case in the former question, or place new information in the context of other course content, as is the case in the latter question.

As Table 5 shows, the students performed better on nine out of ten questions related to the online exercises. The overall average on the exam questions scores from the online source was approximately 79%, about 15% points better than the 63% overall exam score for the semester.

On exams the students were also asked to answer questions related to the in-class activities. For example, two questions from the first exam were: "In the 'Where

Table 5
Online assignment averages compare to overall exam averages

	Online AVG	Exam AVG
JFK/Barnett	89.05	63.12
Local Party	69.71	64.90
Exit Poll	82.71	64.90
Al Gore/Internet	79.80	64.90
Local News/Sensationalism	61.06	64.90
# Congressional Seats	65.36	60.00
Legislative Process	91.22	60.00
Watergate	85.85	60.00
Supreme Court	74.27	65.78
Symbolic Speech	86.89	65.78
Overall Average	78.59	63.43

do I fit?' class exercise, the group that had the most faith in the nation, its leaders, and progress in the nation was the?" and "In the 'Where do I fit?' class exercise, the two groups which disagreed the most were?" Students were offered four choices. Examples from the fourth exam, for instance, were, "As we discussed in class and also saw in the O'Connor/Stewart interview, which Chief Justice had billboards erected urging for his impeachment?" and "As we saw in our in-class exercise, in contrast to the Kentucky display of the Decalogue, the Texas display was ruled acceptable by the US Supreme Court because?"

As Table 6 shows, the students did not do as well on these questions as they did on the online questions, doing just about as well as the exam average. The overall average of the exam questions scores relating to the in-class activities was slightly below 62.91%, a shade below the 63.43% overall exam score for the semester.

In the semester that this course was taught I did not teach a second large lecture course using a traditional lecture approach, so an immediate control group does not exist. However, I did have a similar class the previous semester that lacked significant amounts of in-class activities and had no online assignments. Using this class as a control group, there is some evidence to suggest both the online activities and the in-class exercises had a positive impact on student learning. When comparing the current semester's scores to the past semester's scores on similarly worded exam questions, where the main, and usually only, difference was the "prompting" clause, the current semester students scored about 11% higher, suggesting that these assignments were a useful supplement to the lecture. (See Table 7.) As evidenced in Table 8, even though the students didn't score as highly on the questions related to the in-class activities, there was about a 10% improvement in scores when compared to previous semesters, suggesting that these in-class activities did provide a way for students to learn and retain information.

In traditionally taught large lecture classes on our campus, and I suspect on many other campuses, additional opportunities for graded assignments simply don't exist, and students are largely assessed through exam performance. However, in this course the online assignments and in-class activities allowed for more graded assignments, which were expected to positively impact student learning and would be evidenced by high grades on these assignments as well as raising the overall grade average. In order to assess whether the assignments and activities actually helped the students, it is useful to compare student performance on these additional assignments to their exam scores.

As Table 9 reports, the scores on the online assignments and in-class activities co-vary with exam scores, although the decline on the in-class activities is much steeper than the decline on the online assignments. The *distance from grade* columns are a very simple measure which compares the average score on a task with the lowest possible score to maintain a grade (for instance, 90 points for an "A"). The table initially groups students by their exam scores, so those students who averaged an "A" are together in the "A" row. The table then reports their average scores on the online assignments and in-class activities and then the *distance* from the overall exam average. Table 9 shows that as the average exam score declines the *distance from grade* score increases, meaning that students who score less well on exams tend to be helped by the additional online assignments and in-class activities. Therefore, students who tend to perform the most poorly on exams tend to be helped the most by the additional assignments. If the online assignments and in-class activities are weighted in proportion to their contribution to the overall course score, which was about one-third of the grade, then the effect is about a -1.49 percentage point for A students, a +.41 for B

Table 6
In-class assignment averages compare to overall exam averages

	Online AVG	Exam AVG
Where do I Fit? Enterprisers/Liberals	82.19	63.12
Where do I Fit? Upbeats	52.51	63.12
Literacy Test	70.77	63.12
Electoral Map/Purple	60.09	64.90
Survey/Word Order	91.34	64.90
Iraq Photos/Frame	79.32	64.90
Budget/Liberals	34.63	60.00
Budget/Cuts	49.76	60.00
Congressional Power	49.27	60.00
Warren Billboard	33.49	65.78
SC Dissent	80.78	65.78
Decalogue	70.78	65.78
Overall Average	62.91	63.43

Table 7
Current semester question scores for online assignments compared to last semester

	Current	Past
Local News/Sensationalism	61.06	51.01
Exit Poll	82.71	79.19
# Congressional Seats	65.36	49.46
Watergate	85.85	69.93
Overall Average	73.75	62.32

Table 8
Current semester question scores for in-class activities compared to last semester

	Current	Past
Electoral Map/Purple	60.09	61.74
Survey/Word Order	91.34	85.23
SC Dissent	80.78	57.74
Decalogue	70.78	58.45
Overall Average	75.75	65.79

Table 9
Class Average "Task" Comparison

	In-Class Activities	Distance from Grade	Online Assignments	Distance from Grade
A	90.69	+.69	80.27	-9.36
B	83.03	+3.03	79.46	-.54
C	75.75	+5.75	76.00	+6.00
D	71.80	+11.20	74.63	+14.63
F	66.03	+16.03	73.56	+23.56

students, a +1.94 for C students, a +3.96 for D students and a +6.54 for students whose exam scores were not in the passing range. At the upper range the effects are small but are not insignificant at the lower range. Simply put, these additional points can make the difference between passing and failing.

Discussion and Conclusions

Having students answer multiple choice exam questions and then having them machine graded is, at best, a survival mechanism for instructors in a large lecture course with student numbers in the hundreds. Seen from the most critical perspective, this is just rote learning that simply continues the trend of "mindless bubble filling" which does not lead to the critical thinking that instructors so often hope for. And there is certainly the possibility that students will take not take the time to work diligently on these assignments, for instance by sharing answers, which undermine the intention of the online assignments. If these assignments were counted only as homework, there might be an incentive to behave this way, but given that many exam questions do show up on exams and are clearly noted as coming from the online assignments, student shortcutting should be minimal.

From an instructor's perspective the online assignments were a real bonus. They were useful in order to emphasize certain points, especially if these were the same concepts that previous semesters' students had more difficultly grasping. The online assignments were also useful to illustrate and enrich classroom presentations and discussions. As the surveys have shown, these assignments were received positively by students. The vast majority of the students did complete the assignments, and most of them felt that the assignments helped them understand the course's key concepts. Also important is the fact that the students felt that they were useful in helping them do better on exams. In this course these online assignments were referenced in the classroom, but they not discussed in detail so that their impact could be assessed relatively independently. Student attitude seems to be supported by the evidence as the average score on the questions related to the online assignments were about 16% above the overall exam average.

Student success on these questions could be related to the fact that students had already *seen* them and could study the questions with a reasonable certitude that at least a few of them would show up on the exam, which is exactly the point. If three or four online assignments were covered on each exam, students would need to memorize approximately 15-20 questions, a daunting task to be sure. An attempt to do so would not necessarily be a waste of time, though, as they would be engaging in some extensive reviewing. The improved student scores on exam questions covering information presented in the online assignments suggest that encouraging the retrieval of information as a teaching strategy can be beneficial. Brown, Roediger, and McDaniel (2014) argue that students who take low stakes quizzes or engage in other practices that encourage information retrieval tend to retain more information, do better on exams, and are also better able to apply concepts in different settings. They also report that students come to appreciate and desire these activities and report higher levels of satisfaction with their classes. The high scores given to the effectiveness of the online assignments by this class align nicely with their findings.

Admittedly, there were a few drawbacks to the online assignments related to the technology. Firstly, at the beginning of the semester it will be necessary to get all the students to sign up. While I encouraged this verbally, through email, and in class, there were a few students who were tardy in completing this task. The Americans Governing site was relatively straightforward and getting signed up was easy, but a few students did have trouble with these rudimentary steps. Finally, a few students will claim economic hardship and will ask to be excused from these assignments, but this can be handled on a case-by-case basis.

As was the case with the online assignments, the in-class activities were positively received by students. Most of the students were there for the in-class activities and felt that they helped with course's key concepts and helped them get ready for the exams. Also on the positive side of the ledger was the very high level of student engagement reported on the surveys. While attendance in large lectures can be a problem, these exercises seemed to combat wavering student commitment by giving them incentives to come to class: they could receive points for being there and participating, the activities would be on the exam (answering a perpetual student question), the activities were actually interesting, and student learning was enhanced.

The effectiveness of in-class activities is also a little cloudier, especially when compared to the online assignments, as the mixed results on exam questions testify. Rather than simply suggesting that some students just missed the point, it is necessary to consider whether the instructor failed to clearly make the necessary points or conclude effectively. In looking at those questions where the students scored below the exam average, what becomes clear is that more time needed to be given over to the exercise. Students did tend to score better on questions on which we did spend more class time. They also didn't do quite as well when the activities were embedded in the lecture. This was certainly the case with the *Congressional power*

question where we discussed this at the beginning of the lecture. Even though I warned them to pay attention during the lecture (and did make the lecture slides available to the students through Blackboard) the fact that the *purple* Electoral College map was discussed at the very end of class probably explains the lower score. The lowest scoring question, about Earl Warren, may be best explained by its close association to traditional lecture. Even though, as discussed above, his time on the court was discussed in class, a photo was included in the lecture, and he was also discussed in a video that was shown in class, the discussion clearly failed to make an impression with the students.

Despite some disadvantages associated with both the online assignments and in-class activities, their benefits clearly outweigh the costs and can be used by all instructors regardless of discipline. Often it requires only a simple referencing of an assignment or activity to get students thinking and making connections across chapters, and students do think about how to connect and integrate online and in-class activities to the course content. The implementation of the online assignments was relatively unproblematic and it is not difficult to find textbooks (from accounting to zoology) with a robust online component that can be used by instructors to encourage informational retrieval and recall. Students responded positively to the online assignments, and their levels of participation were high, as were the homework scores. This may be important point for departments who may be facing similar challenges with student success and retention and are looking for a relatively easy way to supplement their instruction.

Getting faculty to buy into more in-class activities may be more challenging, as they require much more time and energy. Their planning and implementation comes at a cost, but as the literature on the benefits of active learning continues to expand, reluctant faculty may take up this challenge. When the students were engaged in any of the in-class activities that semester, the classroom had a dynamic atmosphere, much more so than the standard lecture hall discussed in the introduction. Students were moving about, asking questions, talking to each other, listening to students who were not *like them*, problem solving, and *doing* political science. The extra "attention" from both the in-class activities and the online assignments raised levels of student engagement. Most hearteningly, they also positively affected student performance and had the greatest impact on lowest achieving students, who may also be a college's most challenged students. Taken together, both the online assignments and in-class activities were important to our discipline's course redesign, and they will certainly raise student success rates, remove the perception that the course is a barrier course, and lead to greater retention and completion.

References

Ayers, W., Kumashiro, K., Meiners, E., Therese, Q., & Stovall, D. (2010). *Teaching toward democracy: Educators as agents of change*. New York, NY: Taylor & Francis.

Bernstein, J. (2008). Cultivating civic competence: Simulations and skill-building in an introductory government class. *Journal of Political Science Education, 4*(1), 1-20.

Blount, A. (2006). Critical reflection for public life: How reflective practice helps students become politically engaged. *Journal of Political Science Education, 2*(3), 271-283.

Brown, P., Roediger III, H., & McDaniel, M.A. (2014). *Make it stick: The science of successful learning.* Cambridge, MA: Belknap Press.

Caruson, K. (2005). So, you want to run for elected office? How to engage students in the campaign process without leaving the classroom. *Political Science and Politics, 38*(2), 305-310.

Cavell, T., & Woehr, D. (1994). Predicting introductory psychology test scores: An engaging and useful topic. *Teaching of Psychology, 21*(2), 108-110.

Colby, A., Beaumont, E., Ehrlich, T., & Corngold, J. (2007). *Educating for democracy: Preparing undergraduates for responsible political engagement*. San Francisco: Jossey-Bass.

Cuadros, J., Leinhardt, G., & Yaron, D. (2007). The role of homework activities in acquiring conceptual and performance competence in college chemistry. *Journal of Chemical Education, 84*(6), 1047-1052.

Dahlberg, T., Barnes, T., Bush, K., & Bean, K. (2010). Applying service learning to computer science: Attracting and engaging under-represented students. *Computer Science Education, 20*(3), 169–180.

Diseth, Å. (2007). Approaches to learning, course experience and examination grades among undergraduate psychology students: Testing of mediator effects and construct validity. *Studies in Higher Education, 32*(3), 373-388.

Duch, B., Grohl, S., & Allen, D. (Eds.). 2001. *The power of problem-based learning*. Sterling, VA: Stylus.

Elder, L., Seligsohn, A., & Hofrenning, D. (2007). Experiencing New Hampshire: The effects of an experiential learning course on civic engagement. *Journal of Political Science Education, 3*(2), 191-216.

Frederking, B. (2005). Simulations and student learning. *Journal of Political Science Education, 1*(3), 385–393.

Goss, K., Gastwirth, D., & Prakash, S. (2010). Research service-learning: Making the academy relevant again. *Journal of Political Science Education, 6*(2), 117-141.

Grosen, J., & Washbush, J. (2004). A review of scholarship on assessing experiential learning effectiveness. *Simulation and Gaming, 35*(2), 270-293.

Hamann, K., Pollock, P., & Wilson, B. (2009). Learning from 'listening' to peers in online political science classes. *Journal of Political Science Education, 5*(1), 1-11.

Hannafin, M., Land, S., & Oliver, K. (1999). Open learning environments: Foundations, methods, and models. In C. Reigeluth (Ed*.), Instructional-design theories and models (Vol. II)*(pp. 115-140). Mahwah, NJ: Erlbaum.

Hartlaub, S., & Lancaster, F. (2008). Teacher characteristics and pedagogy in Political Science. *Journal of Political Science Educati*on, *4*(4), 377-393.

Huerta, J. C. (2004). Do learning communities make a difference? *Political Science and Politics, 37*(2), 291-296.

Huerta, J. C., & Jozwiak, J. (2008). Developing Civic Engagement in general education political science. *Journal of Political Science Education, 4*(1), 42-60.

Hunter, S., & Brisbin, R. (2000). The impact of service learning on democratic and civic values. *Political Science and Politics, 33*(3), 623-626.

Jenkins, S. (2008). Sustainable master planning in urban politics and policy: A service-learning project. *Journal of Political Science Education, 4*(3), 357-369.

Jones, R. (2008). Evaluating a cross-continent EU simulation. *Journal of Political Science Education, 4*(4), 404-434.

Jozwiak, J. (2013). Vegelate and Greece: Teaching the EU through simulations. *European Political Science*, *12*(2), 215-230.

Kaunert, C. (2009). The European Union simulation: From problem-based learning (PBL) to student interest. *European Political Science, 8*(2), 254–265.

Kille, K. (2002). Simulating the creation of a new international human rights treaty: Active learning in the international studies classroom. *International Studies Perspectives, 3*(3), 271-290.

Kiltz, L., & Ball, D. (2010). Service learning through colleges and universities. *The Public Manager, 39*(3), 17-21.

Kirlin, M. (2002). Civic skill building: The missing component in service programs? *Political Science and Politics, 35*(3), 571-575.

Erickson, B. L., & Strommer, D. W. (1991). *Teaching college freshmen*. San Francisco: Jossey-Bass Publishers.

Li, Q. (2004). Knowledge building community: Keys for using online forums. *TechTrends*, *48* (4), 24-28.

Lin, T., & Chen, J. (2006). Cumulative class attendance and exam performance. *Applied Economics Letters, 13*(14), 937-942.

McKeachie, W., & Svinicki, M. (2006). *McKeachie's teaching tips: Strategies, research, and theory for college and university teachers*, Boston, MA: Houghton Mifflin.

Oros, A. (2007). Let's debate: Active learning encourages student participation and critical thinking. *Journal of Political Science Education, 3*(3), 293-311.

Orton-Johnson, K. (2009). 'I've stuck to the path I'm afraid': Exploring student non-use of blended learning. *British Journal of Educational Technology, 40*(5), 837-847.

Perry, A., & Wilkenfeld, B. (2006). Using an agenda setting model to help students develop and exercise participatory skills and values. *Journal of Political Science Education, 2*(3), 302-312.

Peverly, S., Ramaswamy, V., Brown, C., Sumowski, J., & Alidoost, M. (2007). What predicts skill in lecture note taking? *Journal of Educational Psychology, 99*(1), 167-180.

Plant, E. A., Ericsson, K. A., Hill, L., & Asberg, K. (2005). Why study time does not predict grade point average across college students: Implications of deliberate practice for academic performance. *Contemporary Educational Psychology, 30*(1), 96-116.

Pollock, P., & Wilson, B. (2002). Evaluating the impact of Internet teaching: Preliminary evidence from American national government classes. *Political Science & Politics*, *35*(3), 561-566.

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education, 93*(3), 223-231.

Rau, W., & Durand, A. (2000). The academic ethic and college grades: Does hard work help students to make the grade? *Sociology of Education, 73*(1), 19-38.

Reeher, G., & Cammarano, J. (1997). *Education for citizenship: Ideas and innovations in political learning*. Lantham, MD: Rowman and Littlefield.

Roberts, M. (2008). Adventures in podcasting. *Political Science and Politics, 41*(3), 585-593.

Rochester, J. M. (2003). Pieces on our craft: The potential perils of pack pedagogy, or why international studies educators should be gun-shy of adopting active and cooperative learning strategies. *International Studies Perspectives, 4*(1), 1-2.

Saltmarsh, J., & Zlotkowski, E. (2011). *Higher education and democracy: essays on service-learning and civic engagement*. Philadelphia, PA: Temple University Press.

Schuman, H., Walsh, E., Olson, C., & Etheridge, B. (1985). Effort and reward: The assumption that college grades are affected by quantity of study. *Social Forces, 63*(4), 945-966.

Shapiro, N., & Levine, J. (1999). *Creating learning communities: A practical guide to winning support, organizing for change, and implementing programs*. San Francisco, CA: Jossey-Bass Publishers.

Shellman, S., & Turan, K. (2006). Do simulations enhance student learning? An empirical evaluation of an IR simulation. *Journal of Political Science Education, 2*(1), 19–32.

Simpson, A., & Kaussler, B. (2009). IR teaching reloaded: Using films and simulations in the teaching of international relations. *International Studies Perspectives, 10*(4), 413–427.

Smith, E. (2006). Learning about power through service: Qualitative and quantitative assessments of a service-learning approach to American government. *Journal of Political Science Education, 2*(2), 147-170.

Spiceland, D., & Hawkins, C. P. (2002). The impact on learning of an asynchronous active learning course format. *Journal of Asynchronous Learning Networks, 6*(1), 68–75.

Sternberger, L., Ford, K., & Hale, D. (2005). International service learning: Integrating academics and active learning in the world. *Journal of Public Affairs, 8*, 75-96.

Taylor, M. (2009). Podcast lectures as a primary teaching technology: Results of a one-year trial. *Journal of Political Science Education, 5*(2), 119-137.

Tiruneh, G. (2007). Does attendance enhance Political Science grades? *Journal of Political Science Education, 3*(3), 265-276.

Touron, J. (1983). The determination of factors related to academic achievement in the University: Implications for the selection and counseling of students. *Higher Education, 12*(4), 399-410.

Van Assendelft, L. (2008). City Council meetings are cool: Increasing student civic engagement through service learning. *Journal of Political Science Education, 4*(1), 86-97.

Wakelee, D. (2008). Short duration political science simulations. *Academic Exchange Quarterly, 12*(4), 70-75.

Williamson, J., & Gregory, A. (2010) Problem-based learning in introductory American politics classes. *Journal of Political Science Education*, *6*(3), 274-296.

Wilson, B., Pollock, P., & Hamann, K. (2007). Does active learning enhance learner outcomes? Evidence from discussion participation in online classes. *Journal of Political Science Education, 3*(2), 131-142.

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Instructional Strategies to Improve College Students' APA Style Writing

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The purpose of this study was to identify areas of APA formatting that college instructors view as most problematic in student writing. Using a Likert-style survey, the greatest areas of reported concern were problems with documentation, specifically, citations, references, and quoting; of lesser concern were various style and formatting errors in student work. Respondents included 135 primarily undergraduate faculty members at institutions where APA style is the required documentation style across disciplines. While the Publication Manual of the American Psychological Association is the definitive source, there are a number of tools, resources, and strategies that may facilitate students' mastery of APA style guidelines. In addition to identifying instructors' concerns, we offer a number of instructional aids (i.e., teaching strategies, support resources, feedback bank, and a sample rubric) to help faculty address the main areas of concern.

College instructors grapple with identifying the most effective strategies to teach students APA format. Seemingly despite numerous resources and even after lessons detailing the nuances of APA, students make frequent and repetitive errors writing in APA style. It is challenging for instructors to both keep up with the changes and revised guidelines of APA style and, more importantly, to identify strategies to effectively teach the format to their students (Jorgensen & Marek, 2013; McDonald, 2011; Smith & Eggleston, 2001; Stellmack, Konheim-Kalkstein, Manor, Massey, & Schmitz, 2009).

Writing in APA style seems like a straightforward task. In some ways documenting and listing references can be conceptualized as similar to figuring out a math problem: plug the correct information into the correct spots and you have a correct answer/reference listing. As such, and in light of myriad resources available like citation generators, web resources, or the *Publication Manual of the APA* itself, instructors often take for granted that students know how to use APA in their papers. But this seemingly *straightforward task* turns into a *frustrating experience* for students and confounds instructor expectations (Van Note Chism & Weerakoon, 2012). The challenges undergraduate students face to adhere to APA style writing guidelines is highlighted in research by Landrum (2013) that finds that students struggle to support claims with citations and are unable to effectively proofread their writing.

While our research survey focused on instructors teaching a primarily undergraduate population, it is worth noting that there is much literature on documenting errors at more advanced levels of scholarship. Errors have been found in a range of published research from social work where close to half (41.2%) contained citation errors (Spivey & Wilks, 2004); Faunce and Soames Job (2001) surveyed reference pages in several experimental psychology journals and found that around one-third of them contained reference errors. In a survey of doctoral student dissertation proposals, one in three citations contained some sort of error (Waytowich, Onwuegbuzie, & Jiao, 2005). There is also a correlation between doctoral students' self-efficacy, as indicated by their rating of their own performance on the first day of class, and the amount of errors they made on the reference page, meaning those that felt less competent, in fact, were (Waytowich, et al., 2005).

Given that at the professional and doctoral levels there are significant problems with APA formatting, it is not surprising that instructors at various levels have attempted to analyze and ameliorate the problem. Franz and Spitzer (2006) did a mixed-factoral, quasi-experimental study where students enrolled in psychology lab sections were variously provided with one of three resource combinations: an APA template, a checklist, or a template *and* checklist. They found that students improved with all resources, but the support of both template and checklist was most valuable to improvement.

Direct instruction in APA along with resources and practice seem to be most impactful. Luttrell, Bufkin, Eastman, and Miller (2010) found that implementing a one-hour course in scientific writing helped students gain efficiency with APA style, although students who worked through self-mastery had some gains as well. This points to the idea that just working with the style is helpful in increasing familiarity, but the more formal teaching of the style augments those gains considerably. Similarly, Fallahi, Wood, Austad, and Fallahi (2006) incorporated writing instruction in four skill areas—grammar, mechanics, style and referencing—in introductory psychology courses. They reported that instruction in referencing using APA style had the most obvious and significant effect on student writing. This is important to note because direct instruction in APA does not require the ability to teach complex grammar rules or addressing organizational issues that non-writing teachers may feel uncomfortable with. Van Note Chism and Weerakoon (2012) found that in new doctoral learners the failure to work methodically and

repetitively along with miscategorizing of sources were the largest contributors to citation errors. They also point out that some students' struggles are rational and deal with consistency (e.g., sometimes an "and" is used between authors' names; other times an ampersand is needed). Attentive practice was noted as the greatest factor in improving citation performance (Van Note Chism & Weerakoon, 2013) again, proving that exposure, meaning teaching, and practice are the keys to strengthening students' facility with APA and ability to cite correctly. Direct instruction seems to be a strong mitigating factor in student performance in APA. Froese, Boswell, Garcia, Koehn, and Nelson (1995) recommend direct instruction early in a freshman's introductory courses to reinforce correct use of style. Similarly, Jorgensen and Marek (2013) found that students attending workshops on APA style guidelines for grammar, mechanics, or references increased their proficiency in identifying APA style errors both immediately following training and after a time delay.

The purpose of the current study is to determine what instructors view as the greatest challenges that students have with APA style writing in order to develop effective instructional supplements and strategies to assist students in gaining competence with APA style.

Methodology

Participants included 135 faculty teaching primarily undergraduate courses at a medium-sized, teaching-oriented institution that offers undergraduate and graduate degrees. All faculty respondents report teaching at the undergraduate level with 23% indicating simultaneous teaching assignments at the graduate level. Faculty respondents teach in both face-to-face (66%) and online (34%) modalities and represent a range of academic rank (38% adjunct, 36% assistant, 18% associate, and 8% full professor). Respondents teach across a range of academic disciplines with 31% social science, 6% sciences, 28% liberal arts and humanities, 21% business, 12% education, and 2% other.

At the target institution, APA style is the required writing style for all undergraduate courses regardless of discipline. Faculty participants were asked to rate the extent to which they saw each of the following APA style errors in their students' writing using a 1- 4 Likert-type scale, (1= never, 2= some, 3= often, 4= frequently):

- Format of in-text citations
- Use of in-text citations
- Format of references on reference page
- Format of direct quotes
- Use of direct quotes
- Proper use of headings/subheadings
- Precision of writing
- Writing style
- Format of title page
- Use of active/passive voice
- Clarity
- Organization
- Format of header
- Overall page set-up
- Tone
- Bias-free language
- Format of appendices

The list of APA style errors was generated based on a theme analysis of instructor comments on 50 sample papers (representing 10 randomly selected papers from each of the following disciplines: social science, sciences, liberal arts and humanities, business, and education). Randomly selected papers that had already been graded by the course instructor were analyzed to determine common themes in APA style errors. Instructor comments were grouped into similar themes resulting in the 17 categories of errors included in the current survey.

Results and Discussion

Aligned with previous research (Faunce & Soames Job, 2001; Landrum, 2013; Spivey & Wilks, 2004; Waytowich, Onwuegbuzie, & Jiao, 2006), responses indicate that instructors saw frequent errors in students' use and format of in-text citations and direct quotes. These areas, along with format of the reference page and listed sources, were reported as most problematic in student writing. Approximately half (between 43.7 and 52.99%) of instructors surveyed reported that these documentation related areas are the most frequently occurring problems they see in students' use of APA style. Similar to the findings of Landrum (2013), while instructors did report inaccuracies in other areas of APA, such as style, tone, and use of headings, those areas did not garner the same response as the frequency of documentation issues. Table 1 highlights the frequencies of errors as indicated by faculty.

Discussion of results are aligned to the corresponding chapters in the *Publication Manual of the American Psychological Association* for organizational and reference purposes. Of greatest concern to instructors, receiving an average score of 3.16 or above (a 4 indicating that the error was seen frequently), were the areas covered in the chapter entitled "Crediting Sources" in Chapter 6 in the *Publication Manual*; these areas include format of in-text citations (3.39), use of in-text citations (3.33),

Table 1
Frequencies of Error

	Never	Some	Often	Frequently	Average Rating
Format of in-text citations	0%	14.18%	32.84%	52.99%	3.39
Use of in-text citations	0%	17.78%	31.85%	50.37%	3.33
Format of references on reference page	0%	21.64%	25.37%	52.99%	3.31
Format of direct quotes	1.49%	22.39%	30.60%	45.52%	3.20
Use of direct quotes	0.74%	25.93%	29.63%	43.70%	3.16
Proper use of headings/subheadings	2.96%	36.30%	26.67%	34.07%	2.92
Precision of writing	0.76%	36.36%	42.42%	20.45%	2.83
Writing style	0.74%	39.26%	36.30%	23.70%	2.83
Format of title page	3.76%	39.10%	29.32%	27.82%	2.81
Use of active/passive voice	5.26%	40.60%	30.83%	23.31%	2.72
Clarity	2.27%	40.91%	41.67%	15.15%	2.70
Organization	1.55%	45.74%	35.66%	17.05%	2.68
Format of header	9.09%	43.18%	28.03%	19.70%	2.58
Overall page set-up	4.48%	53.73%	23.88%	17.91%	2.55
Tone	7.09%	57.48%	21.26%	14.17%	2.43
Bias-free language	9.23%	58.46%	22.31%	10.00%	2.33
Format of appendices	33.08%	43.08%	11.54%	12.31%	2.03

format of references on reference page (3.31), format of direct quotes (3.20), and use of direct quotes (3.16).

Below the highest scoring, dominant concerns related to citing and references, concerns about writing style, and general formatting were interspersed. Concerns from Chapter 2 in the *Publication Manual* entitled "Manuscript Structure and Content" surveyed here included (and listed in order of magnitude of concern as demonstrated by average rating): proper use of headings/subheadings (2.92), format of title page (2.81), format of header (2.58), overall page set-up (2.55), and format of appendices (2.03). Concerns related to writing style, topics covered in Chapter 3 entitled "Writing Clearly and Concisely," were: precision of writing (2.83), writing style (2.83), use of active/passive voice (2.72), clarity (2.70), organization (2.68), tone (2.43) and bias-free language (2.33).

It is apparent from this survey that documenting and citing is the area where students struggle. It is also clear from the literature that students benefit from direct instruction and practice with APA style (Fallahi, Wood, Austad, & Fallahi, 2006; Jorgensen & Marek, 2013; Luttrell, Bufkin, Eastman, & Miller, 2010; MacDonald, 2011). But the reality of most undergraduate programs is that there is limited time to dedicate to generalized APA style lectures, workshops, and activities that are supplemental to the target course content. Thus, while dedicating class time to direct instruction on APA style may be effective, it may not be practical within the time constraints of most academic programs. To help instructors to address common APA style errors, we offer a number of strategies and resources that instructors can utilize within existing class assignments and feedback.

Smith and Eggleston (2001) note that among the variety of studies that have looked at ways to engage and teach students correct APA style, very few of them actually incorporate work with the actual *Publication Manual*. At the undergraduate level in schools where APA is the standard documentation style it may not make sense to have all entering freshman purchase the *Publication Manual*, given the fact that only a fraction of them are actually social science majors. While Smith and Eggleston (2001) found a correlation between digging into the manual and grades, and while this might prove a valuable strategy for psychology graduate classes, this might not be the most practical solution for college-wide documentation learning. Below we provide some practical alternatives to generalized directives that require students to simply follow the APA style manual. Recognizing that the manual is the ultimate authority, we offer a number of supplemental resources from which instructors can pick and choose to meet their needs. The following resources are widely accessible and provide a user-friendly means of fostering proper APA style within existing course structures, assignments and activities.

Teaching Strategies

At the undergraduate level spending course time on APA style is valuable. Introducing and explaining APA style as a function of specific assignments is an effective way to get students focused on and accountable to the topic (McDonald, 2011). Most college students have some familiarity with documenting but often used MLA style in their high school English research papers, so while the concept of citing may not be totally foreign to them, it should not be taken for granted that they are able to transfer their knowledge from one discipline to another. Some methods that could be adapted to work and individually or in small groups might be:

- Employing Classroom Assessment Techniques (CATs; Angelo & Cross, 1993), such as KWLs, allows students who are not complete novices identify what they know (K), would like to know (W), and have learned at the end of the lesson (L), giving instructors a gauge for where students are at and what APA information is still murky to students. Likewise, instructors can assemble lists of common challenges – and their associated correction – for their unique student population to provide a customized guide that is tailored to students' current level of understanding.
- Providing students with a sample APA paper with mistakes to go through and correct the errors. This sample can be tailored to the errors most common for that particular assignment to simultaneously provide students with an example and practice in focusing on the necessary details of APA style.
- Providing students with a list of various types of sources and having them generate a correct reference list. This assignment can be particularly useful when coupled with a topical assignment for the class. For example, students studying a particular theory can be asked to locate a relevant book, journal article, blog, and video resource that informs that topic; then they submit their findings as an APA style reference page utilizing correct formatting. This assignment can be coupled with the previous activity to create a peer-review activity in which they compare resources and identify APA style errors in their peers' lists.
- Utilizing peer review on student papers, focused exclusively on APA style. This approach is particularly useful when combined with an APA style rubric that identifies key issues and highlights correct APA style. For an example of an effective APA style rubric, see Stellmack, Konheim-Kalkstein, Manor, Massey, and Schmitz (2009).
- Giving an open book/open internet quiz (for credit or just as a class exercise) on various aspects of APA documenting; for example, see APA style at http://www.niu.edu /writingtutorial/style/quizzes/APA.htm.

Internet Resources

Often college and universities have their own documentation style sheets available to students. They can generally be found either in a writing center or student resources center link within the learning management system or on the library's website. In the absence of these resources or in the case where they might only discuss basics, students can be referred to several reputable online sources. Purdue University oversees perhaps one of the best and definitive writing and APA resources on the web in their Online Writing Center, or OWL (https://owl.english.purdue.edu/ owl /resource/560/01/), as it is commonly known. While university style guides are often internal only, Purdue's expansive electronic resource is free and available to the public. In addition to an exhaustive list of references and citations, it also includes a sample APA paper, complete with title and reference page, information about style, and guidelines to address the majority of student writing questions.

If the expansiveness of the OWL website is overwhelming for students, the APA style blog (http://blog.apastyle.org, an official blog of the American Psychological Association) provides a more focused resource. Like OWL, the APA style blog provides answers to questions that commonly crop up in college courses but are not addressed in the actual style guide (for example, how to cite a YouTube video); similarly, the blog provides clarification on APA style issues that arise between updates of the official APA Style Manual. Using the search function on the blog home page will undoubtedly lead to strong and definitive answers to pressing and obscure documentation questions.

Provision of Detailed Feedback on APA Errors

One effective way for students to better their command of APA is to actually learn from their errors in their own work. An instructor might choose to allow students a revised grade or some small extra credit points if students go back and correct the errors on papers. One way to do this for an introductory composition or 100 level class would be through detailed comments inserted into the document which

identify errors and provide correction. Since there are some errors that are made repeatedly, this grading task can be made easier through the use of pre-set comments and/or word auto-correct codes. Detailed information on how to create these comments can be found through Microsoft Office Help (http://office.microsoft.com/en-us/word-help/autocorrect-spelling-and-insert-text-and-symbols-HA010354277.aspx). Appendix A provides a table of codes and comments that help identify common errors and provide some instruction for correction.

An alternative method for spurring students who are in later courses to develop fluency with APA is to simply highlight errors within their work rather than provide comments on what they did incorrectly. By simply highlighting the error students are then accountable for digging into the resources and figuring out both what is incorrect and how to best correct it. This kind of processing helps to ensure their responsibility and prompt active learning to avoid that error in the future.

Rubrics

When grading assignments that incorporate APA style, it is best practice to use a rubric to ensure consistency and fairness in grading. Rubrics have also been proven to be effective in student learning outcomes and in their development of skills (Andrade, 2000); additionally, well-done rubrics complement effective in-text feedback (Stellmack, Konheim-Kalkstein, Manor, Massey, & Schmitz, 2009). Waytowich, Onwuegbuzie, and Jiao (2005) suggest that using a rubric to assess their doctoral students would be beneficial to use consistently throughout their program rather than just in the proposal process. Being held accountable through grades throughout their graduate work might make for better adherence and attention to correct documentation. Clearly building this accountability for correct documentation from the outset at the undergraduate level would only strengthen student's grasp of APA.

To encourage students to take APA style seriously and to spend time on perfecting it in their work, it is optimal to include a rubric section on documenting sources and utilizing correct APA format. Some areas that might be listed under that rubric might include: correct in-text citations; correctly formatted reference page; correctly formatted title page, headers, margins and font; consistency between in-text citations and the reference page; and correct use of quotation marks. Ideally this section should carry enough weight that students see APA as an integral part of the writing process; a weight of 15-20% of the overall grade should impart that message to students. Reviewing the rubric in class and stressing, in particular, the weight given to correct APA format is another way for instructors to drive home the importance of student attention to this area. Appendix B provides a sample rubric for this section which can be adapted to individual course needs.

Conclusion

If at the professional and doctoral level citation errors are commonly reported, it is not surprising that undergraduate instructors find abundant APA errors in student work. As the most common and consequential errors reported by instructors revolve around in-text citations and the reference page, using multiple resources to aid students within introductory and even higher level courses is a best practice for encouraging student fluency and mastery with correct documenting style. In addition to direct instruction, providing additional resources for students to use, followed by the use of explanatory feedback and rubrics on assignments to identify common APA errors in submitted work, are ways instructors can ensure students are learning and integrating correct APA style in their work.

References

Andrade, H. G. (2000). Using rubrics to promote thinking and learning. *Educational Leadership*, *57*(5), 13-19.

Angelo, T.A., & Cross, K.P. (1993). *Classroom assessment technologies* (Second Edition). San Francisco, CA: Jossey-Bass.

Fallahi, C. R., Wood, R. M., Austad, C., & Fallahi, H. (2006). A program for improving undergraduate psychology students' basic writing skills. *Teaching of Psychology*, *33*(3), 171-175. doi:10.1207/s15328023top3303_3

Faunce, G. J., & Soames Job, R. F. (2001). The accuracy of reference lists in five experimental psychology journals. *American Psychologist*, *56*(10), 829-830. doi:10.1037/0003-066X.56.10.829

Franz, T., & Spitzer, T. (2006). Different approaches to teaching the mechanics of APA style. *The Journal of Scholarship of Teaching and Learning, 6*(2), 13-20.

Froese, A. D., Boswell, K. L., Garcia, E. D., Koehn, L. J., & Nelson, J. M. (1995). Citing secondary sources: Can we correct what students do not know? *Teaching of Psychology, 22*(4), 235-38.

Jorgensen, T. D., & Marek, P. (2013). Workshops increase students' proficiency at identifying general and APA-style writing errors. *Teaching of Psychology, 40*(4), 294-299. doi: 10.1177/0098628313501037

Landrum, R. E. (2013). Writing in APA style: Faculty perspectives of competence and importance. *Psychology Learning & Teaching*, *12*(3), 259-265. http://dx.doi.org/10.2304/plat.2013.12.3.259

Luttrell, V. R., Bufkin, J.L., Eastman, V. J., & Miller, R. (2010). Teaching scientific writing: Measuring student learning in an intensive APA skills course.

Teaching of Psychology, 37(3), 193-195. doi:10.1080/00986283.2010.488531

McDonald, K. E. (2011). Teaching the 6th Edition of APA style of writing in counselor education. *Journal of Counselor Preparation & Supervision*, *3*(2), 123-144.

Smith, G.E., & Eggleston, T. J. (2001). Comprehending APA style through manuscript analysis. *Teaching of Psychology, 28*(2), 108-10.

Spivey, C. A. & Wilkes, S. E. (2004). Reference list accuracy in social work journals. *Research on Social Work Practice, 14*, 281-286. Doi 10.1177/1049731503262131

Stellmack, M. A., Konheim-Kalkstein, Y. L., Manor, J. E., Massey, A. R., & Schmitz, J. P. (2009). An assessment of reliability and validity of a rubric for grading APA-style introductions. *Teaching Of Psychology*, *36*(2), 102-107. doi:10.1080/00986280902739776

Van Note Chism, N., & Weerakoon, S. (2012). APA, meet Google: Graduate students' approaches to learning citation style. *Journal of the Scholarship of Teaching and Learning*, *12*(2), 27-38.

Waytowich, V. L., Onwuegbuzie, A. J., & Jiao, Q. G. (2006). Characteristics of doctoral students who commit citation errors. *Library Review*, *55*(3), 195-208.

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Learning Online: A Case Study Exploring Student Perceptions and Experience of a Course in Economic Evaluation

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This study explored the perceptions and experiences of a group of students enrolled in an online course in Economic Evaluation. A mixed methods approach was adopted for the data collection, and thematic analysis was used to synthesize the data collected and highlight key findings. The participants identified several positive and negative perceived attributes of online learning, many of which are well documented in the literature. In addition, after exposure to the course, participants reported several factors that affected their learning experience on this course, some of which have not yet been reported in the wider literature. The five main factors affecting learning on this course include: 1) pace of learning in an online environment, 2) learning style, 3) immediacy of feedback, 4) method of content delivery, and 5) issues around navigating content. These findings could help improve online teaching practice and learning quality in future courses.

The number of online courses continues to grow in higher education, with many universities placing greater emphasis on expanding access to online education (Muirhead, 2007; Song, Singleton, Hill, & Koh, 2004). The drivers behind the fast growth of online learning are varied including, but not limited to increasing accessibility, advances in communication technologies, increasing student demand for online flexible or distance learning, institutional need to maintain a competitive offering of diverse learning platforms, and positive financial gains to institutions and students (Ali, Hodson-Carlton, & Ryan, 2004; Muirhead, 2007; Song et al., 2004; Sun, Tsai, Finger, Chen, & Yeh, 2008).

A variety of research studies have investigated distance and online learning, originally from the perspective of faculty involved in the design and delivery of such courses (Ali et al., 2004; Song et al., 2004). In the last few years, however, the emphasis has shifted, and several authors (Ali et al., 2004; Dyrbye, Cumyn, Day, & Heflin, 2009; Ellis & Goodyear, 2010; Ellis, Weyers, & Hughes, 2013; Goodfellow & Lea, 2007; Hughes & Daykin, 2002; Kim, Liu, & Bonk, 2005; Ku & Lohr, 2003; Morris, 2011; Muilenburg & Berge, 2005; Sit, Chung, Chow, & Wong, 2005; Song et al., 2004; Sowan & Jenkins, 2013; Sun et al., 2008) have explored students' perceptions, practices and experiences of online learning. These studies, using quantitative surveys (Muilenburg & Berge, 2005; Sit et al., 2005; Sun et al., 2008), qualitative studies (e.g. Dyrbye et al., 2009; Morris, 2011) or mixed methodology designs (Paechter, Maier, & Macher, 2010; Sowan & Jenkins, 2013), have identified positive and negative aspects of online learning from students' perspectives, such as flexibility, convenience, technical problems, delays in feedback, and feelings of isolation. Studies of students working with learning technologies (Ellis et al., 2013, Goodfellow & Lea, 2007, Gourlay & Oliver, 2014) have also revealed wide variation in student conceptions, approaches, and practices. In their study of campus-based undergraduates, Ellis et al. (2013) found a significant relationship between variations in conception and approach and variations in achievement.

Further research on students' experience of online learning may be particularly important since rapid advances in information and communication technology (ICT), and the changes these have brought to the design and delivery of online courses, change learners' perceptions of their online learning experience (Song et al., 2004). Therefore, continuous investigation of students' perspectives of online learning is needed to improve the design of online courses and optimize the student learning experience. That said, as a core function of higher education is to educate, and a positive student experience may not necessarily be an instructional one, an important extension of this would be to focus on the nexus of learning and teaching with research that explores or highlights pedagogical approaches to improve not only the learners' online learning experience, but also the breadth and depth of learning on these courses.

University College London's (UCL) Institute for Global Health runs an MSc in Global Health and Development. Like many higher learning institutions, UCL is keen to expand student access to online learning (UCL, 2010, 2011). One of the optional modules in this MSc is entitled "Economic Evaluation in Health Care." Economic Evaluation is an intensive course designed to equip students with both a theoretical understanding of the epistemology of

Economic Evaluation techniques and the practical skills to conduct their own basic cost effectiveness, cost utility, and cost benefit analyses. For two years this course was delivered using a conventional, classroom-based approach. The course was well evaluated by students, but the course conveners felt that the practical nature of the course content (i.e. a combination of interactive tutorials and practical exercises using technologies such as spreadsheets) lent itself better to an online learning environment, and they elected to move the module to a new platform. However, there was some concern about how students might receive the move to online learning. As such, it was decided to formally investigate the student experience. This paper reports the findings of that evaluation.

Method

Design of the Online Course

Drawing on constructivist views of learning and distance education research (Anderson, 2008; Fry, Ketteridge, & Marshall, 2009; Holmes & Gardner, 2006; Sharples, 2002), together with work on threshold concepts (Cousin, 2006; Meyer & Land, 2006), the online course was designed to provide online didactic components combined with peer-to-peer learning, regular online contact with a tutor (through discussion forums, live-chat forum, and email), and the creation of a portfolio as the main assessment method. Thus, the students were offered the following:

- Online lectures either in the form of lecture-cast (short video of lecturer with an integrated slide presentation) or screen-cast (short audio with slide presentation).
- Practical exercises (for each lecture or group of lectures with a similar theme) to consolidate foundation or threshold learning concepts, as well as practical extension tasks to develop higher order learning and critical thinking. There was a deadline for each practical exercise to ensure students completed the tasks in time and did not risk falling behind.
- Independent reading lists to add depth to the learning of core ideas and threshold concepts and to consolidate understanding by demonstrating how others have applied the concepts in practice.
- Online tutorials, journal clubs and discussion forums to further extend learning around the topic (i.e., to add breadth rather than depth of understanding) and to enable students to further develop critical thinking skills.

As far as possible, all exercises, tutorials, and other tasks were designed to maximize interpersonal interaction and particularly collaboration between students (i.e. peer-to-peer learning). Enhancing peer-to-peer learning was a key aspect of the course design for two key reasons: first, peer-to-peer learning has been shown to enhance student learning (Ali et al., 2004; Cartwright, 2000; Mastrain & McGonigle, 1997), and second, the course organizers wanted to emphasize a feeling of "being a part of a student cohort" to reduce any potentially isolating effect of e-learning. Students accessed the course content through UCL's online platform, Moodle.

Objectives of the Study

This study had three main objectives: (a) to explore student perceptions of online learning before their exposure to the course, (b) to understand the student experience of learning Economic Evaluation online, and (c) to consider how the design of an online learning experience can overcome negative perceptions and meet or exceed positive expectations.

Participants

Eight students enrolled for the MSc module in Economic Evaluation in the academic year 2012/13. These students, as part of their MSc program in either Global Health and Development (GHD), or International Child Health (IntCH), were invited to participate in the study. They were reassured that their participation or non-participation in the study would have no effect on their course result. All students agreed to participate. Participating students originated from a range of disciplines (including medicine, physiotherapy, and law) and from different parts of the world (including the UK, USA, India, Afghanistan, France, and South Africa). The participants were broadly representative of the students undertaking an MSc in GHD and IntCH, at UCL.

Data Collection

To meet the objectives of this study, we adopted a mixed methods approach using focus group discussions (FGDs) and an online survey to collect data. Triangulating data sources enabled the researchers to use different data to validate and crosscheck findings (Patton, 1990). Three FGDs were conducted in total: one before starting the course, one mid-way through the course and one at the end of the course. The first FGD aimed to explore students' perceptions of online learning generally, the extent to which these perceptions affected their choice to enroll in Economic Evaluation, and their expectations of the course on offer. The second aimed to elicit formative feedback about the course while there was time to act on it, as well as to identify any problems that individual students

were experiencing, in order to provide appropriate support. The aim of the third FGD was to explore the students' experience of participating in the online course. The current study presents the findings from the first and the third FGDs. The FGDs were facilitated by Jolene Skordis-Worrall, while both she and Hassan Haghparast Bidgoli took detailed notes and recorded observations. The discussions were also audio- and video-recorded. The discussions were loosely structured around a guide, designed by the investigators, but every effort was made to keep the discussions open and exploratory.

The online survey was conducted after completion of the course and was completed by all students on the course (n = 8). The questionnaire was comprised of a set of 42 closed- and open-ended questions exploring a range of themes including general feedback on the course and degree of satisfaction, perceived challenges, suggestions for future improvements, their specific comments on the assessment method, methods of delivery, and their feedback on individual sessions (for example, their feedback on the content, usefulness, and quality of each session/lecture).

Data Analysis

The data were analyzed using thematic analysis to identify overall themes and patterns throughout the data. The identified themes were crosschecked independently by both investigators, with reference to the audio/video files and online survey for additional detail or to resolve any conflict in the notes. The identified themes and key points were then compiled with reference to the research questions.

Ethical Considerations

Before commencing with the first focus group discussion, students were told about the reason for the group and were reassured, verbally and in writing, that their choice to participate (or not) in the group, as well as any contributions made during the discussion, would have no bearing on their mark for the course. They were asked to sign a written consent form if they agreed to participate and were reassured that they could withdraw at any time during the discussions. All eight students agreed to participate in the study and did so throughout.

Results

Perceptions of Online Learning

In order to explore participants' perceptions of online learning, the first FGD was convened on the 29th of April 2013, before the course started. To avoid leading participants at the outset, and to minimize any risk of "group think," participants were asked to complete a four-quadrant grid with the first four thoughts that came to mind when they thought of online learning. This was done individually on paper with no group interaction, and it was intended to focus each student on his or her own thoughts and impressions before opening up the discussion and allowing for peer influence. This exercise yielded the following main impressions of, or associations with, online learning in the general sense, presented in Table 1. Table 1 demonstrates a clear and dominant association between online learning and independence, self-reliance, and personal responsibility. Other common themes include the multi-media association, the flexibility of online learning, and a lack of interaction.

To understand what participants meant by these terms, and to understand whether they had positive or negative connotations (i.e., were viewed as relative strengths or weaknesses of online learning), participants were then asked to collectively discuss the positive, neutral, or negative attributes of online learning. This was done without explicit reference to the grid presented in Table 1, although most participants spontaneously began by placing their grid associations into the appropriate categories and then extended their thinking from that point. Group participants clearly found it easier to arrive at negative associations at the outset, with positive associations only emerging later in the discussion and even then being fewer in number. The negative and positive attributes of the online learning environment as described by the participants are summarized below, while Table 2 provides a full list of the phrases proffered in each category by the participants.

According to the participants, the main positive attribute of online learning was the flexibility of the approach, both in terms of time and geographic location. As online learning generally does not require a one to be in class at a certain time, one can work from home at convenient times. This flexibility was also linked with a positive perception of self-reliance. The students get to decide when and where they work and are therefore much more in control of their learning experience. This control extends to being able to pause, rewind, and revisit lectures. Online learning was also synonymous with the immediacy of resources, allowing students to decide when and how they access those resources. Control over the process of learning appeared to be complemented by control over individual thoughts as online learning was perceived to leave the learner to formulate their own ideas, without group influence. Finally, online learning was associated with a greater breadth of access to materials as students expected to be able

Table 1
Four Primary Associations with Online Learning

First Association	Second Association	Third Association	Fourth Association
Internet/not personal	Independent learning	Own time, self-paced	Lack of interaction
Personal responsibility	No face time	Flexibility	Hard work
Self-directed	Focus on student	Most of the time semi-	Stress on the students about
Active student participation	personal study	one way	searching references to cover
Independent	Lack of interaction	communication	the terminology of discussions
Independent work	Self-paced	Motivation	Online chats
Self-reliance	Flexible	Multimedia	Support
	Independent research	Doubling independent	Reading
		reading	Independent thought

Table 2
Perceived Positive, Negative, and Neutral Attributes of Online Learning

Positive	Neutral	Negative
Self-Reliance	Personal responsibility/independent learning	Lack of interaction
Flexibility (can study when and where you want to save travel time)	Mode of technology (depends on the technology working as expected—often beyond student control/ability)	Self-paced (risk of procrastinators)
Can pause/rewind/revisit	Style of learning	Difficulty understanding concepts if clarification/explanation needed
Independent thought (not influenced by group pressure)	Would expect to be cheaper/discounted because of lack of overhead	More chance of flailing on your own
Can have immediate resources	Unfamiliar mode of learning	Dependence on the technology can be risky and frustrating
Can draw on lecturers from around the world, not just UK	More task oriented than lecture based	Not personal (i.e. cannot give examples that relate directly to students' experience within the lecture)
	Online learning for one session versus a whole module/course may have a number of different implications	Don't gain from experience of the rest of the class
		Unfamiliarity can be a source of stress/concern
		Interactivity can be a distraction
		Lack of social support would make this inappropriate for timetabling early in the year
		Loads of readings
		Lack of trust from employers who would prefer employees with campus-based education

to draw on lecturers from around the world and not just from the UK (the physical base of this course).

Many of the positive perceptions of online learning were also listed as negative characteristics of the learning style.

The immediacy of multi-media resources was seen as a potential distraction from learning. The ability to work at one's own pace was a risk for procrastinators who might leave much of the learning until the last minute. Similarly, the room for individual thought was seen by some to reflect a lack of interaction, potentially isolating and limiting students who could not gain from the experience of their peers as they would within a classroom environment. These associations were seen to increase the risk of encountering difficulty in understanding, particularly if minor clarifications or explanations were needed before progress could be made. This might lead students to flail about on their own for a longer time, which might in turn risk their success on the course and would almost certainly increase their stress. Even if students were able to gain answers to their questions, it was felt that these would be generic and not tailored to individual students' experiences or reference points in a way that might be possible during classroom teaching. The perceived lack of social and other support while learning online led participants to argue that online courses are inappropriate for the early stages of higher learning degrees, before social and other bonds are formed. Finally, the participants were concerned that employers might not trust qualifications from online study and might prefer to hire students who undertook *residential* learning in some contexts. See Table 2.

Experience of Online Learning

The students' experience of participating in the online course was explored through a focus group discussion and online survey, both conducted after completion of the course. Students expressed a variety of views regarding their experience of online learning. From thematic analysis of the FGD and the online survey, five themes were identified: pace of learning in an online environment, learning style, immediacy of feedback, method of content delivery, and issues around navigating content (Table 3).

According to the students, the *pace of learning* in an online course is slower than in a classroom-based course. They expressed the view that understanding new concepts in an online course takes longer without the immediate support of peers and teachers to proffer alternative explanations. They strongly suggested that the design of an online course should allow more time for personal reflection. One student stated her concern as follows:

> I feel that I was much slower than what I had been in a classroom environment. Things take longer and I think the time built in didn't allow for this, which made a lot of stress. . .I think the pace is a lot slower than it would be in a classroom based setting and so if the course allow for that personal time to reflect [it] would be helpful. . .

Differences in learning styles were described by the students as another important factor affecting their learning in an online environment. Some students struggled with the sole reliance on online documents and reading lists, online exercises, and virtual journal clubs and discussion forums. Those students explained how the lack of class interaction, personal and in-person contact with tutors and classmates, and visual stimuli limited their learning. The following quotation captures this sentiment, "Discussion forums, feedbacks and solutions were very helpful, but I did not get much from them since I prefer conversation. I do much better when I get feedback by conversation and in-class. . ."

Students stated that a lack of *immediate feedback* from tutors and peers can be an important challenge in an online environment, affecting learning outcomes as expressed by the following quotation, "We need more reflection from the tutor in discussion type sessions to give direction if we go to wrong direction or missed something. . ."

As the quote above illustrates, students commented that more, and more immediate, reflection from tutors during online tasks can give needed direction. This need to feel directed seems linked to a need for reassurance that concepts have been understood correctly and can be applied appropriately. In turn, this reassurance had the potential to mitigate students' sense of isolation when learning online. Students felt their isolation more keenly when they were confused or uncertain, but they were more comfortable learning alone when reassured that they could be successful at the task.

As described earlier, the course conveners were particularly keen to explore how the mode of didactic content delivery affected the student experience. To explore the importance of delivery method, a range of technologies had been used on the course. In the focus group discussion, however, students expressed only a mild preference for the lecture-cast format because they could see the tutor. Instead of engaging in a discussion over delivery method, the students argued strongly that the *method and technology used for delivery was less important than the content*. They preferred the lectures that tutors taught slowly and clearly, giving examples for better understanding of the concepts. They did not enjoy the lectures where tutors simply read the slides and strongly preferred an *added value* approach, where concepts listed on a side were explained verbally in more than one way, ideally making use of examples to support and expound an explanation.

Finally, the students evaluated the content of the course and the course assessment, and provided insight into *the importance of signaling to assist in time planning and the navigation of course content.* As mentioned previously, the course was assessed using a portfolio that students developed

Table 3
Main Themes Identified and Example Quotations

Main Themes	Example Quotations
Pace of learning in an online environment	"The course should allow more time for reflection. a lot of my reflections rushed since I had short time to reflect…"
	"Practical exercises were extremely useful but very time consuming - the workload felt very overwhelming with practically no time to process what we've learned."
	"I think because it was an online course, students struggled to do things and took longer than if we had been in a classroom environment. For example…"
Learning style preference	"Compare with class-based course, less opportunity for reflection from peers and teachers. You need more reflections [from tutors] for directing the discussion, in particular for discussion forum exercises."
	"I know students differ in their learning styles but I think that if this course had been run as an 'in person' course, that would have suited my learning better…"
Immediacy of feedback	"We need more reflection from the tutor in discussion type sessions to give direction if we go to wrong direction or missed something…"
	"More and timely feedback about how we were doing along the way would have been really helpful."
Method of content delivery	"The content of course and lectures were important than the format…Giving examples by the tutor in the lecture was very important."
	"A number of the lecturers spoke very quickly. It is important to remember that an online lecture needs to be slow and as much like a normal lecture as possible…. I think lecturer's who just had slides (not a video and slides) moved particularly quickly through them."
Issues around navigating content	"Beginning weeks had more time to read and reflect on that but last two weeks we had very short time. We were not prepared for that."
	"There is need for a general instruction for all practical exercises, giving a time range for each practical and a star rating for difficulty level…"

throughout the duration of the course. The course assessment is evaluated in detail in a forthcoming paper; however, for the purposes of this discussion, it is relevant to note that the students were unanimously positive about the portfolio as an assessment method. The students did, however, suggest that the workload of the course as a whole needed to be reduced. In particular, they suggested reducing the reading list for the course and allowing more time for the practical sessions. They also recommended a navigation or signaling system to help students allocate their time to tasks on the course. For example, students described how they spent a disproportionate amount of time on earlier, easier tasks and less time on later, more

complex tasks. This was not a conscious choice but a result of the fact that many "ran out of time" at the end of the course. The students suggested that very clear instructions be prepared for all the practical sessions. Aside from directing the task as the current instructions attempted to do, students would like to be given a suggested time range for each of task and even, if possible, for steps within the task. They also suggested a "star rating" system for the difficulty level of each practical session so that students could look ahead, realize a difficult task was pending, and allocate their time accordingly.

Discussion and Conclusion

This study explored the perceptions and experiences of a group of students enrolled in an online course in Economic Evaluation. In particular, this study aimed to: a) explore student perceptions of online learning before their exposure to the course, b) understand the student experience of learning Economic Evaluation online, and c) consider how the design of an online learning experience can overcome negative perceptions and meet or exceed positive expectation. As this constitutes a single case study, the extent to which it can be generalized to all online learning is limited (Tellis, 1997). However, a number of the findings are likely to be relevant to other courses, particularly those findings that relate to online learning generally rather than the course content specifically. Those general findings that may be of wider relevance are the subject of further discussion in this section.

The participants in this study identified several positive and negative attributes of online learning which are similar to those identified in previous studies. Consistent with previous studies (Dyrbye et al., 2009; Kim et al., 2005; Ku & Lohr, 2003; Paechter et al., 2010; Sit et al., 2005; Song et al., 2004; Sun et al., 2008), the convenience and flexibility of online learning, along with the ability to choose the time, place, and pace of learning were viewed as the main advantages of online learning over traditional classroom-based courses. Moreover, in such an environment, learners potentially have the ability to freely choose the most suitable learning approaches to accommodate their needs (Chizmar & Walbert, 1999; Ku & Lohr, 2003). This latter point was not the case for some of our students, however, particularly those who preferred to learn through personal interaction and "in-person" verbal discourse, arguably the only learning approach not generally available to online learners.

That lack of interaction and sense of community coupled with feelings of isolation were perceived as the main challenges of online learning environment by the participants in this study. These too have been identified in the wider literature (Paechter et al., 2010; Song et al., 2004; Vonderwell, 2003; Woods, 2002). Previous studies have also illustrated the importance of a sense of community in students' learning experiences (Rovai, 2002). For example, Rovai (2002) studied 314 students enrolled in 26 online graduate education and leadership courses. They found that the students with a stronger sense of community perceived themselves to have achieve greater cognitive learning and felt less isolated. In order to build sense of community within an online learning environment, Haythornthwaite, Kazmer, Robins, & Shoemaker (2006) recommended a few basic strategies including promoting initial bonding (for example, through initial face-to-face meetings), monitoring and supporting continual interaction and participation, and offering varied means of communication. Those strategies were employed in the design of the course studied in this paper; however, the students highlighted that interaction and participation while important in any form, was most helpful if it was immediate or "real time". Delay in immediate feedback from tutors or other learners has also been reported in previous studies as one of the important challenges of learning in the online context (Ali et al., 2004; Kim et al., 2005; Ku & Lohr, 2003; Morris, 2011; Petrides, 2002; Sun et al., 2008; Vonderwell, 2003). This is particularly the case in asynchronous online discussion forums when students have to wait for their peers or tutors to read and respond to postings (Song et al., 2004), and the findings of this study would suggest that these asynchronous interactions need to be carefully planned and demand active engagement and support from tutors (DeLoach & Greenlaw, 2007; Garrison & Cleveland-Innes, 2005; Jaques & Salmon, 2007). It should be considered that the students in this course were inexperienced online learners, and perhaps with more time to develop their skills and become accustomed to online interaction, they might feel more comfortable without in-person contact.

Another important finding in this study was the assertion by students that online learning is slower. However, while it was not a sentiment expressed by students, the course conveners unanimously agreed that the quality of the student assessments on the course was higher than that of the output produced by students taking the course as a classroom-based offering in previous years. The suggestion was that students had learned "slower but better," and this seems to be supported by other studies that suggest that online learning is slower but deeper compared with classroom-based courses (Petrides, 2002). If this is the case, then in practical terms, an online course cannot cover the same content as a classroom-based course. When designing materials for an online course, more time needs to be allocated for learners' personal reflection in order to enable them to understand, retain, and apply new concepts. This could be done with the

understanding that the student may achieve less breadth in their learning, but greater depth.

The findings this study showed that the delivery method of lectures and technologies used, either in form of lecture-cast or screen-cast, was not as important as the content and quality of the lectures. This finding is in line with Berner and Adams' (2004) study, a randomized controlled trial study in which two groups of students were shown the same slide presentation, one in lecture-cast format and the other in screen-cast format. Although they only tested a single presentation, the results showed that adding video to an audio presentation did not result in either greater satisfaction or greater learning for the students. Instead, the quality of the content was highlighted by our students as critical to enhancing learning and they particularly urged the use of examples and the clear explanation of concepts.

Finally, it is important to note that the findings of this study are subject to a number of limitations aside from those inherent to the case-study approach. Firstly, this research was conducted among students enrolled on an online course but registered for a campus-based MSc. All were physically located in London for a significant portion of the course. As such, this sample may not be representative of global student perceptions because a) these students had demonstrated their willingness to engage with online learning by enrolling on the course and b) they had demonstrated their preference for residential learning by enrolling in a residential MSc. Secondly, these students had previously completed a classroom-based course in health economics taught by the same tutors. As such, their perceptions of the tutors formed through prior exposure to their classroom teaching may have influenced their perceptions of this course. Similarly, the physical proximity of the course tutors may have mitigated some of the isolating effects of online learning described by the students. This positive bias on perceptions would not be sustainable or replicable if the course were open to a wider pool of students based outside of London.

In summary, this study has several implications for teaching practice and also for future research. First, these findings suggest that course content may not directly transfer from a classroom-based course to an online learning environment, as students' learning pace and methods differ. Therefore, the content and teaching methods in online learning should be designed in a way that supports students' deeper learning while accommodating students' learning style/preferences. This may be particularly important for teachers to consider when designing online courses at campus-based institutions or for students also taking classroom based courses. Second, online learning should proactively aim to reduce feelings of isolation and integrate strategies for building interaction and a sense of community into the design the course. Students should be encouraged and advised, before the start of course, on how to build virtual groups and to have "real time Q&A with the on-line tutors. Greater best practice on how to promote effective online facilitation and building virtual groups is highlighted as a future research priority. Third, as suggested by the students participating in our study, learning outcomes and satisfaction are best supported by a focus on clear content and the quality of learning materials, and not necessarily on using sophisticated technologies.

References

Ali, N. S., Hodson-Carlton, K., & Ryan, M. (2004). Students' perceptions of online learning: Implications for teaching. *Nurse Educator, 29*(3), 111-115.

Anderson, T. (2008). *The theory and practice of online learning*. Edmonton, AB: Athabasca University Press.

Berner, E. S., & Adams, B. (2004). Added value of video compared to audio lectures for distance learning. *International Journal of Medical Informatics, 73*(2), 189-193.

Cartwright, J. (2000). Lessons learned: Using asynchronous computer-mediated conferencing to facilitate group discussion. *Journal of Nursing Education, 39*(2), 87-90.

Chizmar, J. F., & Walbert, M.S. (1999). Web-based learning environments guided by principles of good teaching practice. *Journal of Economic Education, 30*(3), 248-259.

Cousin, G. (2006). An introduction to threshold concepts. *Planet, 17, 4-5*.

DeLoach, S. B., & Greenlaw, S. A. (2007). Effectively moderating electronic discussions. *Journal of Economic Education, 38*(4), 419-434.

Dyrbye, L., Cumyn, A., Day, H., & Heflin, M. (2009). A qualitative study of physicians' experiences with online learning in a masters degree program: Benefits, challenges, and proposed solutions. *Medical Teacher, 31*(2), e40-e46.

Ellis, R. A., & Goodyear, P. (2010). *Students' experiences of e-learning in higher education: The ecology of sustainable innovation.* London, UK: Routledge Falmer.

Ellis, R., Weyers, M., & Hughes, J., (2013). Campus-based student experiences of learning technologies in a first-year science course. *British Journal of Educational Technology*, *44*(5), 745–757.

Fry, H., Ketteridge, S., & Marshall, S. (2009). *A handbook for teaching and learning in higher education: Enhancing academic practice.* New York, NY: Routledge.

Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *American Journal of Distance Education, 19*(3), 133-148.

Goodfellow, R., & Lea, M. (2007). *Challenging e-learning in the university: A literacies perspective*. Berkshire, England: Open University Press McGraw Hill.

Gourlay, L., & Oliver, M. (2014). *It's not all about the learner: A sociomaterial account of students' digital literacy practices*. Paper presented at the meeting of the 9th International Conference on Networked Learning, University of Edinburgh.

Haythornthwaite, C., Kazmer, M. M., Robins, J., & Shoemaker, S. (2006). Community development among distance learners: Temporal and technological dimensions. *Journal of Computer-Mediated Communication, 6*(1).

Holmes, B., & Gardner, J. (2006). *E-Learning: Concepts and practice.* London, UK: Sage Publications.

Hughes, M., & Daykin, N. (2002). Towards constructivism: Investigating students' perceptions and learning as a result of using an online environment. *Innovations in Education and Teaching International, 39*(3), 217-224.

Jaques, D., & Salmon, G. (2007). *Learning in groups: A handbook for face-to-face and online environments*. Oxford, UK: Routledge.

Kim, K.-J., Liu, S., & Bonk, C. J. (2005). Online MBA students' perceptions of online learning: Benefits, challenges, and suggestions. *The Internet and Higher Education, 8*(4), 335-344.

Ku, H.-Y., & Lohr, L. (2003). A case study of Chinese student's attitudes toward their first online learning experience. *Educational Technology Research and Development, 51*(3), 95-102.

Mastrain K., & McGonigle, D. (1997). Older student perceptions of technology based learning assignments. *Online Journal of Nursing Informatics, 1*(2).

Meyer, J., & Land, R. (2006). *Overcoming barriers to student understanding: Threshold concepts and troublesome knowledge.* New York, NY: Routledge.

Morris, T. (2011). Exploring community college student perceptions of online learning. *International Journal of Instructional Technology and Distance Learning, 8*(6), 31-43.

Muilenburg, L.Y., & Berge, Z. L. (2005). Student barriers to online learning: A factor analytic study. *Distance Education, 26*(1), 29-48.

Muirhead, R. (2007). E-learning: Is this teaching at students or teaching with students? *Nursing Forum*, *42*(4), 178-184.

Paechter, M., Maier, B., & Macher, D. (2010). Students' expectations of, and experiences in e-learning: Their relation to learning achievements and course satisfaction. *Computer Education, 54*(1), 222-229.

Patton, M. Q. (1990). *Qualitative evaluation and research methods.* Newbury Park, CA: Sage Publications.

Petrides, L. A. (2002). Web-based technologies for distributed (or distance) learning: Creating learning-centered educational experiences in the higher education classroom. *International Journal of Instructional Media, 29*(1), 69-77.

Rovai, A. P. (2002). Sense of community, perceived cognitive learning, and persistence in asynchronous learning networks. *Internet and Higher Education, 5*(4), 319-332.

Sharples, M. (2002) Disruptive devices: Mobile technology for conversational learning. *International Journal of Continuing Engineering Education and Lifelong Learning, 12*(5-6), 504-520.

Sit, J. W., Chung, J., Chow, M., & Wong, T. (2005). Experiences of online learning: Students' perspective. *Nurse Education Today, 25*(2), 140-147.

Song, L., Singleton, E., Hill, J., & Koh, M. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education, 7*(1), 59-70.

Sowan, A. K., & Jenkins, L. S. (2013). Use of the seven principles of effective teaching to design and deliver an interactive hybrid nursing research course. *Nursing Education Perspectives, 34*(5), 315-322.

Sun, P. C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education, 50*(4), 1183-1202.

Tellis, W. (1997). Application of a case study methodology. *The Qualitative Report, 3*(3), 1-19.

University College London. (2010). *UCL institutional learning and teaching strategy.* Retrieved from http://www.ucl.ac.uk/white-paper

University College London. (2011). *UCL council white paper, 2011-2021*. Retrieved from http://www.ucl.ac.uk/teaching-learning/downloads/ILTS.pdf

Vonderwell, S. (2003). An examination of asynchronous communication experiences and perspectives of students in an online course: A case study. *Internet & Higher Education, 6*(1), 77.

Woods, R. H. (2002). How much communication is enough in online courses? Exploring the relationship between frequency of instructor-initiated personal email and learners' perceptions of and participation in online learning. *International Journal of Instructional Media, 29*(4), 377–394.

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Curriculum Integration: The Experience of Three Founding Faculty at a New Community College

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This article explores the design and implementation of the curriculum for City Seminar, an integrated course in the first-year experience at a new community college. This interdisciplinary course focuses on a critical issue that provides content and context for quantitative reasoning (QR), reading, and writing (RW) to strengthen students' developmental skills. This integrated curriculum is taught in a learning community. Its goals include greater information retention, better transfer of knowledge and developmental skills-building while students earn college credit. These tie in with the College's overarching goals of improving retention and graduation rates. Early results from this curriculum are encouraging.

The City University of New York's New Community College (renamed Stella and Charles Guttman Community College in Summer 2013) opened its doors to students for the first time on August 20, 2012. The inaugural class had 289 students, all of whom were first-time freshmen. This was a momentous day for the City University of New York (CUNY) and for those of us who had been working at the College in the months and years prior to opening; the first college to open in the CUNY system in over four decades had been in development for over four years before admitting its inaugural class.

Nationwide, it is estimated that only 12% of first-time, full-time students at community colleges graduate within 2 years (Horn, 2010), rising to 29.2% in three years (NCHEMS Information Center, n.d.). Within CUNY, these numbers are respectively 4.3% and 16% (CUNY Office of Institutional Research and Assessment, 2014). One of the goals in founding The New Community College (NCC) was to raise three-year graduation rates to 30% (Concept Paper, 2008). Through selective implementation of high-impact practices targeting particular programs or populations, higher education institutions have achieved some success in improving retention and graduation rates (Kuh, 2008). By studying the best practices of these programs, NCC has created an evidence-based educational model accessible to all its students to improve retention and graduation rates. In doing so, NCC aims to prepare students for transferring into bachelor's degree programs and/or for entering the workforce upon graduation.

The high impact practices that NCC has adopted are set forth in the Concept Paper (2008) which was the basis for the College's design and, to some extent, its operation. By using these practices for all students enrolled at NCC, we hoped to mirror the success of smaller programs for the whole College. The following high-impact practices provide the framework for the NCC educational model:

- Full-time enrollment is mandatory during the first year to ensure that students' developmental skills needs are met in a timely fashion and to provide students with the momentum that will see them complete their programs of study.
- All programs of study are built around the idea of creating and sustaining a thriving New York City to provide relevance and context to teaching and learning, thereby promoting engagement and retention.
- All NCC students complete a common first-year experience requiring a considerable amount of collaborative work in interdisciplinary courses.
- The College offers only a limited number of majors and electives to ensure that there are clear pathways and well-defined steps to graduation, transfer, and/or employment.
- All degree programs at NCC require capstone courses with culminating projects that integrate and demonstrate application of students' learning.
- Services, such as a robust peer mentor program and embedded advising, are offered to support students in every aspect of their academic progress.
- The College conducts comprehensive and continuous assessment to evaluate the success of each component of its educational model.
- The admissions process is a well-coordinated, multi-step set of student-centered events that serve as an introduction to the College's student support network. Students who are accepted and decide to enroll at the NCC are mostly high school graduates. They participate in a mandatory summer bridge program that prepares them for the transition.
- Co- and extra-curricular activities, including experiential and service learning and

internships, complement curricular coursework to bring more meaning and relevance to the latter.

- Students in first-year cohorts progress together as a learning community.
- There is a focus on research in writing-intensive courses in the first-year experience and beyond. Kuh (2008) has noted the importance of first-year seminars and experiences in building students' basic skills and research abilities. An integrated first-year experience embeds developmental skills building into college-level coursework so that students are earning college credit and progressing toward degree completion as soon as they begin taking courses.

In this paper, the authors—members of the NCC's founding faculty—focus on curricular integration, one aspect of this ambitious new college building endeavor and its implementation in the first-year experience. We examine the highly collaborative process of developing an integrated first-year curriculum and the rationale behind this practice. We evaluate the creation and implementation of this curriculum and the subsequent process of assessment and revision.

The end product of this process was a comprehensive curriculum, complete with supporting materials and a curriculum template to guide faculty at NCC. This multi-disciplinary, integrated curriculum building initiative was not without some challenges. We note the issues we confronted and how we addressed them. Our hope is that, through sharing the initial and subsequent stages of developing an integrated curriculum, others interested in replicating and/or building on our work may learn from our methods and experiences.

Rationale for Curriculum Integration

One of the goals of curriculum integration at NCC is to obviate the need for separate developmental courses. Compared to 4-year colleges and universities, community colleges tend to have a higher percentage of students who enter with below college-level reading, writing and/or mathematical skills. Accordingly, we expected that our high-touch educational model and small size would be attractive to students needing developmental, and other, support, as our model should propel students towards college-level coursework more quickly than a standard community college program while providing students added layers of support that they may not receive elsewhere.

Drake and Reid (2010) described the benefits of curriculum integration in achieving learning objectives of otherwise disparate areas of study. Hinde (2005) has also noted how integrating literacy content with social studies can be used to reinforce skills in both areas. In addition, as Beane (1996) suggests, integration promotes the application of knowledge beyond its mere memorization and retention. CUNY has implemented thematic learning communities to support students who need to take developmental courses with some success. Notably, the First Year Academies at LaGuardia Community College offers several different disciplinary learning communities that link courses in developmental mathematics, reading, and/or writing courses with one introductory college-level course. Acario, Eynon, and Clark (2005) described improved retention and persistence in students who begin their college careers needing developmental coursework. Similarly, our integrated courses build students' developmental quantitative and literacy skills while addressing college-level learning outcomes. Many instructors who teach in courses beyond the integrated first-year experience at NCC have reported the benefits of referring back to and building on issues students encountered in the first-year in facilitating the move to more sophisticated topics and skills.

City Seminar

The College's first-year experience is perhaps its most unique and innovative feature. It is built around the City Seminar, a multidisciplinary course comprised of three integrated components that are centered around a critical issue of relevance to students' lives and experiences. The critical issue provides the content and context to build literacy skills in its reading-writing component and numeracy in the quantitative reasoning component. City Seminar integrates college-level coursework with developmental skills and experiential learning to improve learning outcomes as described extensively in the literature related to these areas (e.g., Bailey, 2009; Cox, 2009; Engstrom & Tinto, 2007; Hinds, 2009; Malnarich, 2005; Stigler, Givvens, & Thompson, 2009; Swaner & Brownell, 2008). The degree of integration spans the four levels described by Beane (1996). The 10.5 weekly contact hours of City Seminar include developmental reading, writing, and mathematical content. Successful completion of the first-year experience ensures that students are at college level in these areas by the end of that year.

The first-year curriculum is common across all majors. Entering students join learning communities during the summer bridge. Students remain in their learning community until they select majors and move into major-specific courses at the end of the first year. The 289 students in our inaugural class were divided into four learning communities (or

"houses") comprised of roughly 75 students each. Within each learning community, students were furthered divided into three cohorts of 18–25 students.

First-year students take City Seminar I in the fall and City Seminar II in the spring. In both City Seminars, students investigate a specific topic related to developing a thriving New York City. City Seminar I is comprised of four integrated components—Critical Issue, Quantitative Reasoning, Reading and Writing, and Group Work Space—with each component being taught by a different professor (Table 1). These three professors, along with the Group Work Space instructor, together make up the instructional team for a cohort. Each house also has a Student Success Advocate who, in addition to being an academic advisor, works in close collaboration with faculty to ensure that students stay on track and persist in the face of academic or other issues that may arise and potentially hamper students' progress.

In City Seminar II, the hours devoted to Reading and Writing are replaced by English Composition I, a 3-credit course separate from City Seminar but linked in content.

In Critical Issue (CI), instructors use a problem-based approach to examine an important topic that relates to New York City and to students' lives. A major goal in this section is to hone students' critical thinking skills and to equip them to examine issues from multiple perspectives while providing them with the context and content to develop numeracy and literacy skills. Quantitative Reasoning (QR) builds numeracy to strengthen students' abilities to recognize and make sense of numerical aspects of real-life situations and to be able to use these skills in everyday contexts. In Reading and Writing (RW), instructors build on students' prior knowledge, make inter-textual connections, and use reflective writing to help students practice critical reading and writing skills and deepen understanding of content. Meta-cognitive reflection encourages students to become self-aware of their reading and writing practices. In Group Workspace (GWS, now termed "Studio"), students develop an understanding of their own learning process and have the time and space to workshop specific academic skills that directly support their work in City Seminar through project-based and experiential activities.

Creating the City Seminars was an interdisciplinary endeavor. The courses' learning outcomes were created collaboratively by faculty from various disciplines. The RW, QR, and CI sections of the City Seminars were built around skills spines outlining the skills that that section of City Seminar was targeting. Subsequently, faculty representing CI, QR, and RW identified which outcomes could be met by activities in their respective components, then merged these activities into several "signature assignments" integrated across the three components to provide a seamless experience for students. Since the "signature assignments" comprise complementary elements from the three components of City Seminar, students can use their discoveries in one to support their work in another. For example, students explore a topic in CI, collect supporting data in QR, and then summarize it in RW. This provides more student-generated resources than traditional courses and instills an interdisciplinary approach to problem-solving, resulting in a holistic learning experience for the student. The development of the initial City Seminar curriculum included:

- Defining learning outcomes for the City Seminar overall, as well as for each of its components;
- Developing clear weekly plans for each component that integrated and coordinated classroom activities and assignments across all three;
- Creating and compiling all course materials (text, video, assignments, classroom handouts, etc.) in an electronic portfolio;
- Providing an experiential learning module linking the three City Seminar components;
- Delineating precisely defined criteria for both formative and summative assessment of student learning outcomes based on rubrics developed for each component

Creating the Integrated Curriculum

The founding faculty came to the college from varied backgrounds and specialized in a range of academic disciplines. All faculty members had previously taught in various college or university settings, and some had also worked as clinicians, administrators, or industry and research consultants. While each member brought a different perspective to the process of designing the interdisciplinary first-year experience, there was respect and appreciation for our diverse backgrounds.

Learning outcomes. As an institution committed to ongoing assessment of all that we do, learning outcomes are at the center of the NCC model and guide our work in curriculum development. During Summer 2011, a number of faculty attended AAC&U Learning Outcomes themed conferences/institutes for professional development and created NCC task forces for the development of learning outcomes at the

Table 1
Structure of the City Seminar by Hours

Component	Weekly Time (hours)
Critical Issue	3
Quantitative Reasoning	3
Reading and Writing (Composition I)	3
Studio (Formerly Group Work Space)	1.5

Note. Based on 10.5 hours per week

institutional, first year, program, and course levels. The draft learning outcomes for the City Seminars were refined and revised to arrive at those listed below:

1. Develop as critical readers of a variety of genres. Students will use note-taking, annotation, paraphrasing, and summarizing to demonstrate their understanding of course texts and course content.
2. Develop as critical writers in a variety of genres. Students will demonstrate that they can write and revise drafts; summarize, paraphrase, and quote from texts; and incorporate citations.
3. Demonstrate understanding of major international urban centers, including New York City and their communities from social, cultural, historical and political perspectives;
4. Identify, interpret and assess the perspectives of multiple stakeholders' in different parts of the world on critical urban issues and evaluate the evidence supporting each position;
5. Make judgments and draw conclusions based on quantitative analysis of data, while recognizing the limits of this analysis.
6. Demonstrate an understanding of policies and decision-making processes, their impact upon global urban development, and how to advocate effectively within existing political structures.
7. Begin to identify and distinguish between quantitative and qualitative components pertinent to decision-making.
8. Demonstrate a growing accuracy and fluency with numerical calculations.
9. Use computer applications that help them develop presentations and analyze/organize data.
10. Develop and use a meta-cognitive vocabulary to talk about learning.
11. Demonstrate the ability to work independently and collaboratively on classroom assignments, projects, and oral presentations.

These learning outcomes formed the basis for content in the City Seminar components, assignments in each component, signature assignments across the Seminars, and the skills "spines" that listed the specific skills to be developed in each component.

Skills spines. We use the term "skills spine" (Table 2) to refer to those topics or concepts that are the basis of the components of City Seminar, and that should be covered in every offering of the City Seminar. We believed that creating a template of the required skills would make it easier for new faculty or for faculty with different interests to change the topic, yet adhere to the programmatic learning outcomes. The skills spines focused on key areas. Starting from the earliest drafts, in an iterative, recursive process, as has been the case with all our curriculum development, they were refined to the version shown below.

The initial syllabus created for Fall 2012 (our inaugural semester), used the topic or thematic content as the focal point to build the concepts around the spines. Faculty that have joined the College since have worked with these spines and, in some cases, integrated additional skills into these spines informed by their work with the students in the classroom.

Topics and texts. Initially, faculty spent considerable time discussing and debating the merits of potential topics/critical issues. Prior to narrowing down to a single topic for the City Seminars, several were identified, including consumption, waste and recycling, homelessness, transportation, healthcare, and immigration. It quickly became apparent that, due to time constraints, it would be best to focus on three overarching topics. The group later narrowed the focus to *consumption, waste, and recycling* for City Seminar I and *immigration* for City Seminar II.

Finding a topic that would work equally well across all three components presented some challenges. CI and RW were easier to connect; however, finding QR data on the topic that would be relevant to the students was more challenging. Once the topics were selected, faculty identified texts and resources to address the topics. We divided the reading of potential texts amongst ourselves and discussed the merits of each text in subsequent meetings in terms of relevance to topics (consumption, waste and recycling;

Table 2
Skills Spines Categories

Critical Issue	Quantitative Reasoning	Reading and Writing
Knowledge Inventory/Introduction to Topic	Module 1: Counting, Measuring, Estimating, (Educated) Guessing	Reading
Historical Perspectives		Writing
Investigation of Multiple Perspectives I	Module 2: Spreadsheets: Storing data values from the Seminar Topic	Research
Investigation of Multiple Perspectives II	Module 3: Interpreting Charts and Graphs	Meta-Cognitive
Critical Analysis	Module 4: Manipulating Data, Arithmetic (and other) operations and computations	
Presentation, Reflection and Assessment		
	Module 5: Compound Units of Measurement & Multi-Dimensional Data	
	Module 6: Introduction to Representing Quantitative Phenomena Using Mathematical Language	

immigration) and areas (critical issue, reading and writing, and quantitative reasoning).

At the strong recommendation of the developmental English faculty member that there was value for developmental reading purposes in students reading a book from cover-to-cover, we also spent a significant amount of time vetting books that could serve as a central text for the City Seminar. Faculty attempted to find texts that were relevant to a New York City centric curriculum and to our students in general. Once a text was selected (e.g., *No Impact Man* by Colin Beavan was well researched and written in an accessible, narrative style. Additionally, the author writes about New York City, has a comprehensive website, and regularly speaks to students and other audiences.), faculty needed to familiarize themselves with it to relate it to assignments (e.g., QR used statistics from the book to help inform class discussion and instruction.)

Sharing the curriculum. After the syllabi for the three integrated components were complete, the faculty responsible for coordinating the design of each component assembled resource folders containing supplemental material that supported the common topic. These folders held a multitude of resources including sample assignments, supplemental readings, films, databases and a bibliography containing all resources related to the content. Additionally, each sample assignment was accompanied by a module description that outlined the component and course learning outcomes that the assignment addressed and assessment rubrics, where possible. The module also included other assignments that the assignment could be paired with to create a scaffolded set of activities if the instructor chose to use them in that manner. All of these items were assembled into a City Seminar I Instructional Binder (see Appendix A for a list of items in the binder) that was provided in both paper and electronic forms to all faculty teaching City Seminar. The intention was to have these resources readily available so that faculty newly assigned to this incredibly complicated integrated teaching environment could pull quickly from the resources in the binder for inspiration or use them as they were to develop a semester-long integrated experience for the students. Appendix B lists examples of integrated assignments that were required at different points in the semester.

Assessment and Revision

For the second iteration of City Seminar (offered in Fall 2013), adjustments were made to relieve some of the tensions that cropped up during the inaugural City Seminar course. Teaching teams were assembled, when possible, prior to the close of the 2012-2013 academic year to afford faculty the time and space to work through the curriculum prior to the beginning of fall classes. The administrators also organized several hours of planning time for the instructional teams to organize and coordinate the City Seminar curriculum.

Additionally, there were major changes to the City Seminar curriculum. Two authors of this paper had worked together on one instructional team following the curriculum as shared in the Curriculum Binder. This

instructional team reported a successful and smooth passage through the City Seminar curriculum with their students. However, this was not the experience of all of the teaching teams. Some faculty members preferred more flexibility in the curriculum from topics to assignments. Furthermore, some faculty wanted to move away from consumption, waste, and recycling and build a curriculum around the broader topic of environmental sustainability. For the second iteration of City Seminar, members of instructional teams received the topic name, the learning outcomes, a multi-media resource bibliography, skills spines for all of the components, and an orientation outlining the required elements of City Seminar. Two signature assignments would be determined by each instructional team to meet the learning outcomes for the City Seminars.

In response to student, faculty, and peer mentor feedback on the Group Workspace component of City Seminar, Group Workspace was redesigned as Studio. The focus shifted from direct academic support for the City Seminar curriculum to a more generalized sequence of academic skills-building. In this newly revised space, graduate students, working with the undergraduate peer mentors, determine the content and lead students through exercises and activities to build their socio-academic habits of mind.

Challenges in the Process

Broadly, challenges were philosophical or logistical, sometimes both. Working collaboratively to create a single, uniform curriculum when team members were from varied disciplines presented its own challenges. As is often the case with our students, the way we learn and process information is at least partly a function of our disciplinary training and experience. The skills spines described earlier emerged in such discussions where we drew on expertise and disciplinary knowledge of all faculty members while keeping in mind the important skills that should be addressed in each section of the City Seminars. Often there were differences of opinion on content to include for various components of the City Seminars. One way we were able to use our diverse assets was by working in smaller groups instead of in a single group of all seven founding faculty members. In groups of two or three we could more easily communicate across disciplines and focus on building a curriculum based on learning outcomes. Working in smaller groups on a particular component of the City Seminar allowed for more rapid progress in developing the curriculum for that component. In these smaller groups, faculty members also began to build out topics based on their particular interests and expertise. While we learned to recognize and respect our colleagues' contributions, making those contributions mesh seamlessly was not as easy as when curriculum building resulted from a broader discussion involving all faculty members. This could require some tinkering and reworking in the tradeoff between working more rapidly and working in a more integrated and interdisciplinary fashion.

As our awareness of one another's strengths and disciplines grew, this resulted in a mutual respect and camaraderie that allowed for easier resolution of philosophical differences to bring about consensus. Consequently, while we might disagree, we were able to continue researching, discussing, writing, and rewriting as necessary.

This process made us realize the need for the space and time necessary for this kind of work. Creating and working in a learning community takes discussion, sharing of ideas, coordinated planning, and reflection for such a community to function smoothly and have successful outcomes. As we transitioned from the planning stages to implementation when the College opened its doors to students, we realized that time for collaboration must be a valued part of the work. To this end, we built Instructional Team Time into the teaching load, with 1.5 hours each week set aside for the teams to meet and plan, revise, and/or adjust the curriculum as necessary. Building the curriculum for the first time was exciting and challenging; we expect our students to work with a curriculum that is dynamic, so the work of building, or rebuilding, will be ongoing, as will the need for the resources that go with it. We are currently experimenting with faculty-led planning sessions preceding the start of the semester to give more time for teams to work with the curriculum before classes begin. Although we have not yet found the right formula, we have used two-hour collaborative sessions for City Seminar teams, as well discipline-specific teams (e.g., for all the faculty teaching Reading/Writing).

Participants need to communicate collegially, clearly and on an ongoing basis (Geri, Kuehn, & MacGregor, 1999). They need to start out by familiarizing themselves with their partners' perceptions of the process and styles of working. A point person can help keep the group on task. The process is likely to evolve and become smoother as group members learn more about and from one another. Professional development from experts external to the group and from group members in the areas of learning communities, curriculum integration, and developmental skills is invaluable to the process and in helping group members' benefit from the expertise of their peers. It is important to set aside the time for these efforts.

Faculty members engaged in frequent peer reflection and review to further curriculum development in the year leading up to the opening of the College. They held teach-ins to familiarize all existing and incoming colleagues with the work that

was being done and to use everyone's questions and feedback to make the curriculum more robust.

One of the most difficult challenges to overcome was the lack of time for new faculty to prepare their City Seminar courses. On-boarding for a course such as City Seminar requires enough time for faculty to review relevant materials and to work with their assigned instructional team. The initial training for new faculty occurred on two full days during annual faculty leave in early August. The orientation was organized by the Provost's office and sought to cover all aspects of the College including its history, technology, governance, the reappointment, promotion and tenure processes, a tour of the facilities, and an introduction to all courses in the first year.

An additional challenge was that a faculty member might not be an expert in the specifics of the central topic for the City Seminar (Sustainability and Immigration for City Seminar I and II respectively). Therefore, it is important that new faculty have time to review the literature required for the course and to prepare their individual syllabi and in-class activities. It is also beneficial to have the opportunity to meet with faculty teaching in the same component across different learning communities. The process of on-boarding for new faculty has improved each semester.

The City Seminar Instructional Binder was created and distributed to faculty teaching teams in July, but newly hired faculty who did not join the College until one or two weeks before the fall semester did not have ample time to digest the complicated curriculum. Furthermore, most of these new faculty members were joining already formed instructional teams and were relegated to following a curriculum that had been set by the previously assembled team members with little personal input to the curriculum. However, it was not only new faculty that were unfamiliar with the curriculum; because the curriculum was distributed during annual leave, many faculty members did not have a chance to look at it before the 2012 school year began in late August. The binder was distributed electronically during summer, and then faculty were given paper copies during the planning days just prior to the start of the fall semester. The faculty member who compiled the binder hosted a curriculum development workshop that walked the faculty through the binder and gave advice on how to use it as a resource. However, one issue that became immediately clear is that some faculty members interpreted the items in the binder as requirements. Although the binder was intended as a teaching resource and contained a multitude of ideas for integrated instruction across the three City Seminar components, without proper orientation to the document, most faculty assumed that there was an expectation that they had to follow the course plan exactly as it was presented in the binder. In actuality, the only requirements were the two integrated assignments and evidence that the skills in the three skills spines were being addressed in the classroom activities.

Conclusions

Guttman Community College is still very young, but, in some respects, our model has already seen success. Retention from the first to the second year is well above CUNY and national averages. This ranges between 54.3 (ACT, 2010) and 56% (NCHEMS Information Center, n.d.) nationally. At CUNY community colleges, this is 65.4% for the cohort entering the University in Fall 2012 (CUNY Office of Institutional Research and Assessment, 2014). At NCC, 74.4% of the students entering in Fall 2012 continued into Fall 2013 (CUNY Office of Institutional Research and Assessment, 2014), which is an encouraging indicator for our model. Two years after entering, 27% of the students in NCC's inaugural class graduated with their associate's degree from Guttman Community College. This number compares favorably with the CUNY-wide 2- and 3-year graduation rates of 4.1% and 16% respectively for the most recent years (CUNY Office of Institutional Research and Assessment, 2014), a New York State 3-year graduation rate of 19.6% (Chronicle of Higher Education, 2010), and a nationwide 3-year graduation rate of 29.2% (NCHEMS Information Center, n.d.).

We believe that our model of curriculum development can be replicated at other like institutions. By sharing the challenges we faced in our process, we hope to smooth the transition from small- to large-scale curriculum integration at institutions that are interested in implementing an integrated curriculum. Each institution is unique and is likely to have its own institutional and organizational challenges (e.g., legacy, policy, politics, entropy). To address these, it is useful to take the time and effort to familiarize oneself with one's colleagues in terms of personalities, working styles, and disciplinary expertise. We found that carefully listening to our colleagues over time resulted in genuine appreciation for their points of view and greater comfort in giving ground on certain issues. Greater familiarity with diverse viewpoints brought with it the ability to have more open discussions. Awareness of colleagues' diverse strengths allowed greater synergy in using them productively.

One of the most important aspects of the implementation of the integrated curriculum was student buy-in. During the admissions process, our instructional model was explained to prospective students and their supporters in detail once during a group information session and again during a one-on-one information session facilitated by faculty and staff.

Each student that enrolled at NCC was willing to take part in the grand experiment of whole-college curriculum integration. Our students were and continue to be flexible as we take corrective measures during or between semesters, and they seem to adjust well to our revisions.

Developing and operationalizing this kind of rich curriculum to deliver content and build skills requires considerable effort on the part of faculty and support from institutional administration. It can have implications for course assignments and teaching loads and, as such, there needs to be an openness to experiment in the search for alternative ways to help students succeed.

References

Arcario, P., Eynon, B., & Clark, J. E. (2005). Making connections: Integrated learning, integrated lives. *Peer Review*, *7*(4), 15-17.

ACT. (2010). What works in student retention? Fourth national survey. *Community College Report*. Retrieved from http://www.act.org/research/policymakers/pdf/droptables/CommunityColleges.pdf

Bailey, T. (2009). Challenge and opportunity: Rethinking the role and function of developmental education in community college. *New Directions for Community Colleges*, *145*(Spring 2009), 11-30.

Beane, J. (1996). On the shoulders of giants! The case for curriculum integration. *Middle School Journal*, *28*(1), 6-11.

Cahill, C., Cosares, S., Fuller, K., Rosenthal, W., Saint-Louis, N., Schnee, E., & Seth, N. (2011). Designing an integrated and innovative first-year curriculum for the New Community College at CUNY. *NCC Self Study Report for CUNY Office of Academic Affairs.* [Internal communication].

Chronicle of Higher Education. (2010). New public colleges (2-year). College completion: Who graduates from college, who doesn't, and why it matters. [Microsite of Chronicle of Higher Education]. Retrieved from http://collegecompletion.chronicle.com/state/#state=ny&sector=public_two

Concept Paper. (2008). *A new community college concept paper.* Retrieved from http://www.cuny.edu/academics/initiatives/ncc/Documents/NCC_Concept_paper.pdf

Cox, R. D. (2009). *The college fear factor: How students and professors misunderstand each other*. Cambridge, MA: Harvard University Press.

CUNY Office of Institutional Research and Assessment. (2014). *Institution retention and graduation rates of full-time first-time freshmen in associate programs by year of entry: Guttman.* [Data file]. Retrieved from http://www.cuny.edu/irdatabook/rpts2_AY_current/RTGI_0001_FT_FTFR_ASSOC_COMM-GM.pdf

Drake, S. M., & Reid, J. (2010). Integrated curriculum: Increasing relevance while maintaining accountability. Research monograph 28. *The Literacy and Numeracy Secretariat: What Works? Research into practice.* Ontario, CA: Ministry of Canada. Retrieved from http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/ww_integrated_curriculum.pdf.

Engstrom, C., & Tinto, V. (2007). *Pathways to student success: The impact of learning communities on the success of academically under-prepared college students.* Final report prepared for the William and Flora Hewlett Foundation. Syracuse, NY: School of Education, Syracuse University.

Geri, L., Kuehn, D., & MacGregor, J. (1999). From innovation to reform: Reflections on case studies of 19 learning community initiatives. J. MacGregor (Ed.) *Strengthening Learning Communities: Case Studies from the National Learning Communities Dissemination Project (FIPSE)* (pp. 195-203). Olympia, WA: The Evergreen State College, Washington Center for Improving the Quality of Undergraduate Education.

Hinde, E. R. (2005). Revisiting curriculum integration: A fresh look at an old idea. *The Social Studies*, *96*(3), 105-111.

Hinds, S. (2009). *More than rules: College transition math teaching for GED graduates at the City University of New York*. New York, NY: CUNY Office of Academic Affairs.

Horn, L. (2010). *Tracking students to 200 percent of normal time: Effect on institutional graduation rates.* National Center for Education Statistics, Institute of Education Sciences. Washington, D.C.: U.S. Department of Education. Retrieved from http://nces.ed.gov/pubs2011/2011221.pdf

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter.* Washington, DC: Association of American Colleges and Universities.

Malnarich, G. (2005). Learning communities and curricular reform: "Academic apprenticeships" for developmental students. *New Directions for Community Colleges*, *129*(Spring 2005), 51-62.

Marcus, J. (2013). *New figures suggest community college grad rates higher than thought*. The Hechinger Report. Retrieved from http://hechingerreport.org/content/new-figures-suggest-community-college-grad-rates-higher-than-thought_12824/

NCHEMS Information Center. (n.d.). *Retention rates: First-time college freshmen returning their second year.* Retrieved from

http://higheredinfo.org/dbrowser/?level=nation&mode=graph&state=0&submeasure=228

Snyder, T. D., & Dillow, S. A. (2012). *Digest of education statistics 2011*. *National Center for Education Statistics, Institute of Education Sciences*. Retrieved from the National Center for Education Statistics website: http://nces.ed.gov/pubs2012/2012001_0.pdf

Stigler, J. W., Givven, K. B., & Thompson, B. J. (2009). *What community college developmental students understand about mathematics*. Stanford, CA: The Carnegie Foundation for the Advancement of Teaching.

Swaner, L. E., & Brownell, J. E. (2009). *Outcomes of high-impact practices for underserved students: A review of the literature*. Washington, DC: Association of American Colleges and Universities.

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Appendix A
Digital Instructional Binder

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Appendix B
Example of Integrated Assignments

Sample Activities/Assignments across the Integrated Course

Cycle 2: The Afterlife of our Material World
Week 7: Introduction to Topic: Waste, Recycling and Sustainability

Critical Issue	Quantitative Reasoning	Reading and Writing
Clicker poll: My waste & recycling habits Garbage classification activity Our Eco-Footprint (connecting cycles 1 and 2) **Assignments:** • Field exercise: Observe and record waste and recycling practices in your neighborhood • Garbage inventory • Response Journal #5 (Reflections on garbage inventory)	*Quantitative focus:* Translate problems from a variety of contexts into a mathematical representation and vice versa. Worm Composting Bin set-up **In class:** Methods of interpreting and representing quantitative data - *Garbage Land* quantitative data analysis Calculate and compare your carbon footprint **Assignments:** Create compost data collection instrument	Recycled poetry and classroom "gallery walk" Begin carbon footprint report Note-taking techniques (continued) **Assignments:** • Reading Journal #6 (Detailed summary of *Garbage Land* reading) • Draft #1 of Carbon Footprint Report

Cycle 2 Week 8: Historical Perspectives on Waste and Recycling in NYC
Students explore how and why New York City's waste and recycling practices have changed over time and create timelines of waste and recycling practices.

Readings: *Strikebreaker* (coursepack) *How Epidemics Shaped the Modern Metropolis* (coursepack)		
Critical Issue	Quantitative Reasoning	Reading and Writing
Visit the Lower East Side Tenement Museum Visual historical timeline of waste and recycling practices in NYC **Assignments:** • Response Journal #6 (Reflections on museum visit)	*Quantitative focus:* Understanding and using compound units of measurement. Prediction and Rates. **In class:** • Cholera! Investigating the NYC cholera epidemic of 1832 • Understanding prediction and rates • Continue collecting compost data • Refine compost data collection instrument	Peer-review carbon footprint report Reading discussion of *Strikebreakers* The work of narrators in fiction Peer-review neighborhood observation essay **Assignments:** • Carbon footprint report <u>due</u> • Reading Journal #7: Understanding the narrator's point of view in *Strikebreakers* and #8 (Summary and response of cholera articles) • Draft #1 of Observation and Description of Neighborhood Waste and Recycling essay

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Ideas and Approaches for Teaching Undergraduate Research Methods in the Health Sciences

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Training in research methodology is becoming more commonly expected within undergraduate curricula designed to prepare students for entry into graduate allied health programs. Little information is currently available about pedagogical strategies to promote undergraduate students' learning of research methods, and less yet is available discussing the challenges and benefits of such approaches for students and faculty. The present article provides a brief review of literature of pedagogically descriptive articles, provides two further examples of possible approaches, and discusses the challenges and benefits of using the described approaches to teach research methods to undergraduates in the health sciences.

The inclusion of research methods in pre-professional health education has been a topic of discussion since the 1970s (Johnson, 1973), but though effort has been directed at achieving this aim, little is written about successful pedagogical approaches. Undergraduate research experiences are categorized as high impact learning practices (National Survey of Student Engagement [NSSE], 2013) which may come through competitive, structured institutional enrichment opportunities (often in summer), honors programs, or faculty mentoring (e.g. independent studies or participation with faculty research projects) (Blanton, 2008). After being involved in such experiences, students report gains on numerous knowledge and skills including the ability to understand the research process/design, conduct research, analyze and interpret data, and understand primary literature (Lopatto, 2004; Seymour, Hunter, Laursen, & DeAntoni, 2004). The development of these skills may be dependent upon the stage of involvement in the research project (Adedokun et al., 2014). Undergraduate research experiences may expand awareness of opportunities after the undergraduate degree; reinforce, clarify, or change career and graduate school aspirations; and increase their professional qualifications (Adedokun, et al., 2012; Russell, Hancock, & McCullough, 2007; Villarejo, Barlow, Kogan, Veazey, & Sweeney, 2008; Willis, Krueger, & Kendrick, 2013).

There is increasing emphasis on research within the allied health fields of physical therapy, occupational therapy, and physician assistants. The allied health fields (and nursing) support evidence-based practices which require erasing or crossing the line between research and practice. The research agenda of the American Physical Therapy Association includes 80 items within seven categories of research: basic science, clinical, education/professional development, epidemiology, health services research/policy, workforce, and measurement development and validation (Goldstein et al., 2011). The research agenda of the American Occupational Therapy Association and the American Occupational Therapy Foundation (2011) includes 23 major research goals within five categories: assessment/measurement, intervention, translational, basic, health services, and research training. The prioritized research agenda from American Academy of Physician Assistants includes 20 research topics within four areas: value, roles, workforce, and education (Fang, 2012).

Thus, it may be important to provide a foundation and instill excitement for research among pre-professional health undergraduate students. Familiarity with research skills would inform knowledge translation or the application of knowledge to healthcare decision making (Strauss, Tetroe, & Graham, 2011): the central element to evidence based practice. However, according to the National Survey of Student Engagement (2013), a lower percentage of senior undergraduate students in the health professions (18%) report participating in research with faculty compared to all senior undergraduates (23%). The difference is greater when comparing these health profession students to those in biological (45%) and physical (39%) sciences. Teaching and learning strategies and activities within a course in research methods may provide the opportunity to engage more students in undergraduate research and achieve similar benefits for students who participate in extra-curricular research.

Only a few pedagogical techniques of undergraduate students are described in the literature, many of which come from the field of nursing. Table 1 summarizes the characteristics of the undergraduates, selected activities of the course, information related to the use of Institutional Review Boards, and any reported outcomes. The number of students involved in the courses varied considerably. The use of literature reviews, article critiques, and research proposals occurred frequently. When original data collection was included, the research project was initiated or directed

Table 1
Selected Characteristics of Pedagogy for Undergraduate Research Methods

	Population	Assignments / Activities	IRB	Outcomes
August-Brady, 2005	N = 9 Undergraduate nursing Moravian College	Survey modification Survey development Data collection Article critiques Formal mini-integrative literature review Data analysis Oral and Poster Presentations	No IRB indicated External	Qualitative
Dobratz, 2003	N = 47 (total) 2 classes Undergraduate nursing Mount St. Mary's College	Class discussion Abstract cards Research report critique Research proposal (poster)	No IRB	Course evaluation
Henderson, Buising, & Wall, 2008	N ≈25 per semester Biochemistry Drake University	Multi-year process for novice researchers, primary researchers, and student mentors 2 hrs/wk discussion 12 hrs/wk laboratory Assignments vary by student level: Research participation Research pre-proposal Research abstract Literature review Mentoring Research Report	No IRB (not human research) External	Project productivity presentations
Hitchcock & Murphy, 1999	N= 56/61 (usable) Undergraduate nursing College of Our Lady of the Elms	1st semester Junior year : Students were subjects in faculty research project 2nd semester Junior year: In the required research course, students became data collectors in an expansion of original faculty research project including interviewing lay persons The faculty research project was used to discuss / relate course content Faculty entered and analyzed the data then reported the findings to the students at the end of the semester in a research forum	Informed consent of lay persons No student IRB project	Three-page reflection paper on data collection experience Positive attitudes toward research
McCurry & Martins, 2010	N = 72 Undergraduate nursing University of Massachusetts Dartmouth	Small group worksheets. Clinical nurse researcher presentations and discussion Literature review-summary Student group presentations of published research Small group article discussions *"The Great Cookie Experiment"*	Exempt for course evaluation	Student reported effectiveness for achieving objectives comparison to traditional assignments
Pfeffer & Rogalin, 2012	N= 10 Sociology Purdue University North Central	Active learning assignments: literature review and research proposal, qualitative coding activity, IRB training 4 weeks of guest (Intradepartmental) discussion series: students read authored research and developed discussion questions Real world context: (same) guests discussed challenges, rewards, motivations of researchers	No research project completed	Positive (quantitative and qualitative) course evaluations

by the instructor. The instructors may be responsible for decisions within the research project such as instrument selection and sampling (Hitchcock & Murphy, 1999) or for providing the data to be analyzed (Pfeffer & Rogalin, 2012). While some of the research courses required students to complete ethical research trainings, none of the courses included student-initiated projects which were subject to Institutional Review Board approval.

Learning Model: Team-Based Learning

Educational aims for health science undergraduates have moved from simply transferring content and knowledge to the emphasis on critical thinking, application, and creative problem solving (Bagnasco et al., 2014). Team-Based Learning (TBL) has gained popularity as an evidence-based teaching approach in recent years (Michaelsen & Sweet, 2011; Parmelee & Al-Kadi, 2014). TBL differs from traditional didactic experiences in education by creating an engaged learning process emphasizing application rather than simple rote memorization (Bleske et al., 2014; Hrynchak & Batty, 2012). Based in constructivist theory, TBL is an active learning approach that turns the focus of learning to the student and utilizes problem solving and cooperative learning (Hrynchak & Batty, 2012). TBL has been supported as an active teaching and learning approach that may facilitate meaningful learning (Gleason et al., 2011) in all of the domains of Bloom's taxonomy (Allen et al., 2013), including the higher order thinking processes undergraduate faculty often desire to develop most.

Parmelee (2011) established two distinct uses of small group learning within the education of health professionals: discovery (suited for complex ethical considerations) and accountability (where content mastery leading to application is the primary concern, often seen with TBL approaches). Studies supporting the use of TBL in the preparation of health professionals abound (Koles, Stolfi, Borges, Nelson, & Parmelee, 2010). TBL has further been used to prepare students for changes in educational experiences by shifting them towards problem-based issues they will face in future training and in their careers (Abdelkhalek, Hussein, Gibbs, & Hamdy, 2010).

The effectiveness of TBL isn't without contrasting findings (Sisk, 2011). Willet, Rosevear, and Kim (2011) compared team based learning versus small group learning with a sample of second year medical students and found students preferred small group learning though both groups performed similarly on exams. In the undergraduate environment student satisfaction is a factor important to the evaluation of faculty, and therefore this finding should be considered. Accordingly, Davidson (2011) suggests developing TBL as a classroom approach is an iterative, slow, and deliberate process for the instructor.

Undergraduate students in the health sciences are an underserved population in attaining research experience. These students may benefit from participation in research experiences not only as undergraduates, but also as they apply to graduate programs and as health professionals. Limited pedagogical techniques are available to use as models for increasing undergraduate research with larger numbers of students and limited resources. TBL within the context of student-initiated, IRB-approved research projects may be used to achieve similar outcomes as more resource intensive strategies. The purpose of the paper is to provide a comparison of pedagogical techniques using TBL to facilitate learning outcomes of an undergraduate course in research methods.

Context Description

Both authors maintain tenure-track assistant professor positions in a teaching intensive department with a 4/4 undergraduate teaching load within a large selective four-year, primarily residential public university with the Carnegie designation of balanced arts and sciences/professions with some graduate coexistence. The research methods course is required for seniors pursuing a BS in Health Sciences. The course is offered in both academic semesters, and classes either meet three days a week for 50 minutes each or twice a week for 75 minutes. Typically, there are seven sections of the course per semester with 20 to 30 students per section. The authors present two approaches to teaching research methods through the use of a student-initiated, IRB approved research project.

Approach 1

After a brief introduction to research methods and criteria used in consideration of problem selection, students are asked to submit three research topics they would like to work on throughout the semester. After reviewing these topics, the instructor lists four to six topics that occur frequently and/or include exceptional novelty while excluding topics that exceed the available resources. Students are assigned a number, and then a random number table is used to determine the order in which students are able to choose a topic and group; groups include four to six students each.

After group introductions and discussion to refine the initial research topic, students begin the first individual assignment: a multi-step process culminating

in an annotated bibliography. While each step is completed as an individual, students discuss their outcomes with group members and refine the research question before proceeding to the next step. Students locate, read, and evaluate a published literature review to identify gaps in the literature, justify delimitations of their project, and identify possible procedures and instruments. Students identify a theoretical perspective which will guide the development of hypotheses and define the constructs within the context of the project. After identifying key words, students conduct a literature search for peer-reviewed journal articles. From the search, students choose six articles to read and create annotations with specific implications for the proposed research project. The annotated bibliography assignment concludes with a synthesis across the annotations and the revised research question.

After written feedback is provided for each submission, each student locates two published surveys to operationalize variables within their project. Through the development of a preliminary methods section for the research proposal, students describe the items on the instruments, the scoring procedures, the data collection procedure, the sampling, and the data analysis plan related to the hypotheses. Students incorporate additional sources to evaluate the validity and reliability of the instruments. Each student's investment in these instruments facilitates the discussion and debate over instrument selection within the group.

The first group assignment is a written research proposal including an introduction, literature review, and proposed research procedures. Because of the required preliminary individual work, each group typically has 25-30 sources to justify the research proposal and numerous instruments from which to choose in the proposed data collection procedures. After written feedback is provided for the extensive research proposal, a revised abbreviated version is submitted to the university's Institutional Review Board. The submission includes the finalized data collection instrument and informed consent document. The instructor accepts the role of research advisor and allows the students to retain the role of Responsible Researchers. Review requests submitted by the students may qualify for either an exempt or expedited review. The students work with the IRB to resolve any concerns until the research is approved. To be compliant, students complete an external certificate program for social and behavioral research with human subjects.

While the IRB is reviewing the requests, each group develops a codebook within SPSS which is then distributed to all group members. Upon IRB approval, each student collects data from at least 25 subjects and enters the data into SPSS. Typically, data collection includes the distribution of printed surveys and collection through a secure dropbox to maintain anonymity of participants. The individual datasets are combined, and then the students develop the syntax following the established scoring protocol of the surveys. Using the data analysis plan established in the research proposal, the students test and interpret their hypotheses. At this point in the semester, students have a better grasp of appropriate statistical procedures and may elect to revise, improve, and augment the original data analysis plan.

The final research report is developed by revising the original research proposal, incorporating the findings from the data analysis, and comparing their findings to the existing literature. Within the final exam period, each group presents its study within the context of a professional conference to model professional practice.

Assignments within the research project (both individual and group) contribute to approximately one third of the final grade in the class. Students complete peer evaluations of all group members, including themselves, three times during the semester: after the literature review submission, after the IRB submission, and after the final paper and presentation.

Approach 2

Initially, this approach began by following the traditional first five chapter model in order (introduction, literature review, methods). However, over recent semesters this approach has been modified substantially based on several internal and external factors to present the methodology significantly earlier in the process. At present the project is aimed at developing a final paper in manuscript form and a poster presentation.

The project works at balancing content exposure, application of course content within the project, and group driven inquiry. A small pre-test with a writing sample, their stated career goals, and self-reported academic performance are used as a method of placing students with similar interests and habits into groups. At the beginning of the semester, team and whole class discourse surrounding team topic selection is used as an important piece in establishing a community of active, engaged learners within each class. Open discussion also allows students to be inspired by teams who have chosen to pursue more challenging or innovative topics. Topics must be approved by the instructor typically by the end of the second or third week.

Once a topic has been approved, teams begin reading and accumulating information into a matrix. Using a file-sharing application such as Google Docs or Dropbox, students create a matrix similar to an annotated bibliography, but in table form where each row represents a different article. The matrix includes the following columns: proper APA citation, topics

(dependent and independent variables) covered in the article, study design / methods, population and sample size, instruments used, a brief summary of findings, and a column for comments where students can place any information they want to keep track of for later. Each student identifies his / her contributions by typing initials of the student recording each article (this also helps the instructor check that all group members are participating). The completed matrix includes twenty or more articles that facilitate the development of three to five research questions within each team based on their newly gained knowledge. Following each and every team submission a peer and self-review of contribution is submitted by each student electronically via Qualtrics; students are required to identify tasks each person within the group completed as well as their own contributions. This evaluation approach provides the much needed accountability often lacking in team environments. Each student completes an external certificate program for social and behavioral research with human subjects early in the term and outside of class, so they are familiar with ethical principles of research conducted with humans.

The focus of the course moves rapidly to methodology. Design, sampling, quantitative versus qualitative approaches, instrumentation / scoring, and writing an analysis plan are often foreign concepts to undergraduates. Spending time on these elements first enables the student to consider the literature they are reading in a new way and to develop ideas about how studies are designed in relation to their topic, as well as to learn the benefits and limitations of those approaches. The aforementioned approach is an internal reason to move rapidly into methodology; however, the external reasoning is attempting to develop the methodology in order to meet IRB submission deadlines with enough time remaining in the semester to collect data and complete the project.

Students submit the methodology section (design, sampling, instrumentation, and analysis plan) to the instructor. During the following class period, each team reviews the projects that are not their own and provides written feedback to the other students. The instructor provides instruction on giving and receiving constructive feedback. The instructor is committed to reading and providing written feedback by the end of the day. This peer review process allows students to receive multiple critiques of their submission. Students are also able to compare and learn from the submissions that they evaluate. The quick turn-around is a time challenge for the instructor; however, identifying significant methodological flaws early prevents a lot of wasted time for everyone and also helps the IRB submission process go more smoothly. Students have one week to make improvements and re-submit the document to the instructor for a grade. The week following their re-submission, the students complete the IRB paperwork using both in class and out of class time.

After completing/submitting the IRB document students turn their attention to writing a more thorough representation of the literature. One class period is typically dedicated to a writing center workshop regarding sentence level revision. The literature review phase is the most familiar piece of the paper to students.

Typically, students receive IRB approval for their projects within a matter of a few weeks as projects are limited to expedited or exempt IRB categories. As data collection begins the lectures shift to descriptive and inferential analysis followed by the essentials of entering data and SPSS (recoding and calculations). Data collection procedures are dependent upon the methods section but may include observation, physical measurements, and/or written surveys. The classroom moves to a computer lab for the latter components, allowing teams to use their own data to complete the steps described. Students continue to use their new skills independently to complete data entry and recoding while lectures focus on data communication (how to use graphs, charts and tables) and assistance in developing the layout of the results and conclusions sections of the paper. Students submit a completed project (manuscript form) the week before finals and orally present their team poster during finals.

Challenges, Limitations, and Points of Discussion

The two approaches discussed above may have several benefits for health science programs as compared to other techniques. Using the TBL approach, approximately 180-200 students per year are able to participate as primary investigators in IRB approved research projects completed inside singular semesters. Other approaches either require multiple semesters (Henderson, Buising, & Wall, 2008; Hitchcock & Murphy, 1999), have only been used with significantly smaller classes (August-Brady, 2005; Pfeffer & Rogalin, 2012), or require only a research proposal (Dobratz, 2003; McCurry & Martins, 2010). The two approaches outlined here use forms of TBL and small group work to complete a research study within one semester. The two approaches use slightly differing strategies to arrive at a similar outcome: the completion of the study. The benefits of undergraduates completing research projects as described in this paper fall in line with the benefits of TBL described in the review of the literature: the process is active and forces student engagement; the process focuses on application, not just memorization, of knowledge on multiple levels (understanding the task they need to complete *and* understanding the literature related to the chosen topic); it utilizes the upper levels of Bloom's taxonomy

(application, analysis, synthesis, and evaluation); and it requires students to work collaboratively to problem solve and think critically. Together these learning experiences may lead to deeper, more meaningful learning for students.

A direct comparison of student learning outcomes between the two approaches is difficult because the courses differ in other ways, the two instructors are not the only instructors of this course, and there are multiple course scheduling factors which influence course section enrollments. Across several years the authors have utilized different outcome objectives for the class (test/memorization based, first 3 chapters/proposal only, and full project), each time modifying the course to improve areas where learning was weakest. The approaches described here are those that have yielded better learning as demonstrated by increased quality of final projects and improved ability to intelligently discuss findings during final presentations (describing their own study, responding to peer questions, and asking insightful questions of each other). After completing the course students report that the research process is demystified and therefore less intimidating, that they feel more competent when reading the literature, and that they have a sense of pride in having completed such a big undertaking. Further, as students matriculate and begin graduate programs, their feedback to the faculty members expresses a sense that the skills gained have made them feel well prepared and helped them succeed.

However, TBL to complete a student-initiated, IRB approved research project in one semester is not without its own challenges. A few of the most common challenges faced by faculty and their students are listed in Table 2; similarities and differences between the two approaches are discussed below. Undergraduates may not complete tasks or meet expectations without further training and input from faculty beyond class time and traditional office hours; therefore, the time cost-to-productivity benefit ratio is a concern for faculty mentors. The time cost of training might be lessened in laboratory settings in preparatory courses where students can be trained once for a discreet, repetitive skill set. The application can be more challenging in community engagement or live persons work where the environment and reactions need to be more dynamic.

While both approaches use TBL to conduct a student-initiated research project in one semester, the differences need further discussion. The timelines and order of course content differ. Approach 1 focuses almost completely upon survey research and uses separate learning activities to address experimental research. Approach 2 presents all methodologies first, allowing greater variety of choice for research projects among students. The difference in timelines between the two instructors is a potential benefit to other campus resources. The librarians and the Writing Center are able to manage the requests for contributions of their time and guidance for students who are at different points of the process at slightly differing times. This benefit may be most apparent for the Office of Research Integrity, which provides initial screening and organizational oversight for the Institutional Review Board. Teams guided by approach 2 often submit their project for IRB approval ten to fourteen days sooner than groups under approach 1. Having 16-20 projects submitted simultaneously may be more burdensome than the same number of projects submitted over two weeks. Thus far, all student groups have been successful in obtaining IRB approval. Both approaches reinforce the cyclical nature of the research process.

The process of determining which students are in which groups also differs between the two approaches. In approach 1, all students within a group express an interest in a particular topic. Through the random order, individuals at the end of choosing topics have fewer choices, but they are able to see who is already in a particular group. As researcher interest is a key consideration in the selection of a research problem (Neutens & Rubinson, 2014), this approach is meant to discourage apathy. However, students selecting their own groupings may result in students with differing motivations/abilities/pre-requisite skills ending up in the same group. Students have differing ideas of the topic to which they signed up. In approach 2, there may be less difference in motivations/abilities/pre-requisite skills within each research team. However, there is a greater negotiation of the research topic which has the potential to be dominated by one group member.

Students are often unable to come up with researchable problems at the beginning of the course. They are often either unclear about what research is (distinguishing it from a research paper or lab they may have written in an introductory course) or unrealistic about what can be achieved in a semester (curing cancer). Regardless of approach 1 or approach 2, the faculty member is tasked with guiding students to a sufficiently narrow topic and identifying realistic variables that have existing measures. The faculty member need not be an expert in multiple content areas, but he or she must possess the research skills to assist refinement of research questions and identification of instruments. TBL is used to overcome this challenge. It is the responsibility of the teams to justify their choices with evidence and to convince the faculty member of their rationale. When the students are expected to be the content experts, the questions addressed to the faculty become more meaningful. They change from, “What is the answer?,” to, “How do I find the answer?,” and they change from, “What should I do?,” to “This is what I want to do, so how do I do it?” Just as faculty time is a limited resource, student time and time management are challenges. The course

Table 2
Identified Challenges for Students and Faculty in Relation to Teaching Applied Research Methods

Challenge	Student	Faculty-Program
Balance of teamwork and individual responsibility	Portion of grade dependent upon fellow student ability and engagement	Equitable assessment
Perceived differences in rigor across sections	Student satisfaction may be impacted by perception of learning more or "easier" class	May impact student evaluation of course / instructor used in promotion-tenure decisions
Completing a project inside a single semester	Extensive out of class time commitment	Covering course material not directly applicable to research project (evaluation research)
Research problem selection	Engaging this process can be overwhelming at the start	New topics every semester; Multiple content expertise
Ethical challenges	Student appreciation for human rights?	Study participants volunteering for potentially un-publishable work
Effort/time burden vs. benefit	Perceptions may vary in relation to perceived utility in future career field	Delays in student appreciation of benefit; Labor intensive approach for faculty may have additional productivity costs; Is this teaching, service, or scholarship?
Class Size	Unique small class environment	More sections must be offered in order to keep class size small.

is currently only three credits (unlike lab sciences which garner 4 credits), and most students are enrolled for 15 -18 credits total. The course represents 16-20% of their course load. Students may perceive the level of involvement and time commitment required by the project in this course as outweighing potential benefits. The requirement for individual and group assignments (approach 1) may overly burden the students. Approach 1 relies more heavily on individual assignments to "accurately" assign grades. The individual assignments may provide greater evidence of contributions to group assignments. The underlying assumption to this strategy is that the higher quality individual submissions are more likely to be incorporated into the group project. Peer evaluations are used to rectify substantial differences in quality or quantity of contributions of group members to group assignments. Within some groups, all individual assignments contain similar content errors or lack of depth. Approach 2 relies more heavily on assigning grades for group submissions and adjusting the grades of individuals based upon the peer evaluations and assessing individual knowledge or ability to apply knowledge via examinations. Prospectively recording task distribution, establishing and monitoring internal team deadlines, and journaling student activities may provide more complete characterization and evidence of individual contributions to the team submissions.

For students who excel in the class, the course creates a strong foundation for a recommendation for graduate programs including: physical therapy, occupational therapy, public health, and physician assistant. For faculty, the projects can identify students for independent studies or for research assistantships. Utilization of TBL to complete a student-initiated, IRB approved research project within the confines of a one semester course in the health sciences is challenging and rewarding for both faculty and students. Faculty and students in other disciplines may be able to use a similar approach. Further research is warranted to investigate student outcomes relative to different types of instruction in research methodology and the subsequent performance in graduate programs.

References

Abdelkhalek, N., Hussein, A., Gibbs, T., & Hamdy, H. (2010) Using team-based learning to prepare medical students for future problem based learning. *Medical Teacher, 32*(2), 123-129.

Adedokun, O. A., Parker, L. C., Childress, A., Burgess, W., Adams, R., Agnew, C. R., . . . Teegarden, D. (2014). Effect of time on perceived gains from an undergraduate research program. *CBE Life Sciences Education, 13*(1), 139-148. doi:10.1187/cbe.13-03-0045

Adedokun, O. A., Zhang, D., Parker, L. C., Bessenbacher, A., Childress, A., & Burgess, W. D. (2012). Research and teaching: Understanding how undergraduate research experiences influence student aspirations for research careers and graduate education. *Journal of College Science Teaching, 42*(1), 82-90.

Allen, R. E., Copeland, J., Franks, A. S., Karimi, R., McCollum, M., Riese II, D. J., & Lin, A. Y. (2013). Team-based learning in US colleges and schools of pharmacy. *American Journal of Pharmaceutical Education, 77*(6), 115.

American Occupational Therapy Association & American Occupational Therapy Foundation. (2011). Occupational therapy research agenda. *American Journal of Occupational Therapy, 65*(Suppl.), S4–S7. doi:10.5014/ajot.2011.65S4

August-Brady, M. M. (2005). Teaching undergraduate research from a process perspective. *Journal of Nursing Education, 44*(11), 519-521.

Bagnasco A., Cadorin L., Tolotti A., Pagnucci N., Rocco G., & Sasso L. (2014) Instruments measuring meaningful learning in undergraduate healthcare students: A systematic review protocol. *Journal of Advanced Nursing, 71*(3), 655-664. doi: 10.1111/jan.12520

Blanton, R. L. (2008). A brief history of undergraduate research, with considerations of its alternative futures. In R. Taraban, & R. L. Blanton (Eds.), *Creating effective undergraduate research programs in science.* (pp. 233-246). New York, NY: Teachers College Press.

Bleske, B. E., Remington, T. L., Wells, T. D., Dorsch, M. P., Guthrie, S. K., Stumpf, J. L., . . . Tingen, J. M. (2014). Team Based Learning to improve learning outcomes in a therapeutics course sequence. *American Journal of Pharmaceutical Education, 78*(1), 1-5.

Davidson, L. (2011). A 3-year experience implementing blended TBL: Active instructional methods can shift student attitudes to learning. *Medical Teacher, 33*(9), 750-753.

Dobratz, M. C. (2003). Putting the pieces together: Teaching undergraduate research from a theoretical perspective. *Journal of Advanced Nursing, 41*(4), 383-392. doi:10.1046/j.1365-2648.2003.02538.x

Fang, R. (2012). A national agenda in support of research on the PA profession. *Journal-American Academy of Physician Assistants, 25*(6), 39-43.

Goldstein, M. S., Scalzitti, D. A., Craik, R. L., Dunn, S. L., Irion, J. M., Irrgang, J., . . . Shileds, R. K. (2011). The revised research agenda for physical therapy. *Physical Therapy, 91*(2), 165-174.

Gleason, B. L., Peeters, M. J., Resman-Targoff, B. H., Karr, S., McBane, S., Kelley, K., … Denetclaw, T. H. (2011). An Active-Learning strategies primer for achieving ability based educational outcomes. *American Journal of Pharmaceutical Education, 75*(9).

Henderson, L., Buising, C., & Wall, P. (2008). Teaching undergraduate research: The one-room schoolhouse model. *Biochemistry and Molecular Biology Education, 36*(1), 28-33.

Hitchcock, B. W., & Murphy, E. (1999). A triad of research roles: Experiential learning in an undergraduate research course. *Journal of Nursing Education, 38*(3), 120-127.

Hrynchak, P., & Batty, H. (2012). The educational theory basis of team-based learning. *Medical Teacher, 34*(10), 796-801.

Johnson, C. A. (1973). The development of a practical research method for the improvement of selected health science curriculum. *Journal of Allied Health, 2*, 168-172.

Koles, P. G., Stolfi, A., Borges, N. J., Nelson, S., & Parmelee, D. (2010). The impact of team based learning on medical students' academic performance. *Academic Medicine, 85*(11), 1739-1745.

Lopatto, D. (2004). Undergraduate research as a high-impact student experience. *Peer Review, 12*(2), 27-30.

McCurry, M. K., & Martins, D. C. (2010). Teaching undergraduate nursing research: A comparison of traditional and innovative approaches for success with millennial learners. *Journal of Nursing Education, 49*(5), 276-279. doi:10.3928/01484834-20091217-02

Michaelsen, L. K., & Sweet, M. (2011). Team-based learning. *New Directions for Teaching and Learning, 2011*(128), 41-51. doi:10.1002/tl

National Survey of Student Engagement. (2013). *A fresh look at student Engagement—Annual results 2013.* Bloomington, IN: Indiana University Center for Postsecondary Research.

Neutens, J. J., & Rubinson, L. (2014). *Research techniques for the health sciences* (5th ed.). San Francisco, CA: Pearson Benjamin Cummings.

Parmelee, D. (2011). Effective small group learning: Guide supplement 48.1 – viewpoint. *Medical Teacher, 33*(12), 1031-1033.

Parmelee, D. & Al-Kadi, A. (2014). Team-Based Learning. In K. N. Huggett & W. B. Jeffries (Eds.), *An introduction to medical teaching* (2nd ed.) (pp. 69-76). New York, NY: Springer Science & Business Media.

Pfeffer, C. A., & Rogalin, C. L. (2012). Three strategies for teaching research methods: A case study. *Teaching Sociology, 40*(4), 368-376.

Russell, S. H., Hancock, M. P., & McCullough, J. (2007). Benefits of undergraduate research experiences. *Science*, *316*(5824), 548-549. doi:10.1126/science.1140384

Seymour, E., Hunter, A., Laursen, S. L., & DeAntoni, T. (2007). Establishing the benefits of research experiences for undergraduates in the sciences: First findings from a three-year study. *Science Education, 88*(4), 493-534.

Sisk, R. (2011). Team-based learning: Systematic research review. *Journal of Nursing Education, 50*(12), 665-669.

Strauss, S. E., Tetroe, J. M., & Graham, I. D. (2011). Knowledge translation is the use of knowledge in health care decision making. *Journal of Clinical Epidemiology, 64*(1), 6-10.

Villarejo, M., Barlow, A. E. L., Kogan, D., Veazey, B. D., & Sweeney, J. K. (2008). Encouraging minority undergraduates to choose science careers: Career paths survey results. *CBE-Life Sciences Education, 7*(4), 394-409.

Willet, L. R., Rosevear, G. C. & Kim, S. (2011). A trial of team-based versus small group learning for second year medical students: Does the size of the small group make a difference? *Teaching and Learning in Medicine: An International Journal, 23*(1), 28-30.

Willis, D. A., Krueger, P. S., & Kendrick, A. (2013). The influence of a research experiences for undergraduates program on student perceptions and desire to attend graduate school. *Journal of STEM Education: Innovations and Research, 14*(2), 21-28.

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Slaying the Writing Monsters: Scaffolding Reluctant Writers through a Writing Workshop Approach

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Drawing on four years of anecdotal data and student feedback on course evaluations, this paper provides a retrospective account of the author's experience with teacher candidates in an elementary writing instruction course as first-time authors of children's books, in particular focusing on a writing workshop approach as an effective pedagogical orientation to scaffold reluctant writers through the writing process. The primary diagnostic "tool" or form of assessment of student writing within the writing workshop model of instruction is accomplished through writing conferences. In the practice of conferring as a primary form of assessment, a constructive literacy approach is embraced within which the assessment of student writing is designed to offer ongoing targeted feedback and incremental goals for improvement, as well as guide subsequent re-engagement lessons. In the process, students' stamina as writers is built, the assessment stance and overall effectiveness as an instructor of writing instruction is improved, and the learning outcomes of the course are better met. The paper serves a paradigmatic or illustrative purpose that may inform other education professionals and contribute to their repertoire of pedagogical skills or assessment practices, encourage conversations about honing our craft as educators, and generate questions for future empirical analysis.

In the fall of 2009, I began teaching a course in Elementary Writing Instruction in an initial teacher certification program nested in a private, co-educational liberal arts college situated in the New York City metropolitan area. The course is designed to prepare teacher education students for the necessary competencies required in the practice of effective writing instruction in the elementary classroom.

The course focuses on a multi-genre approach to writing that provides learners with the opportunity to write in different contexts. The course learning outcomes emphasize the ability to identify language arts performance standards for elementary school, describe traits of good writing that enrich the writing process, implement a variety of assessment and record-keeping practices to monitor individual and class progress in writing, demonstrate the ability to adapt writing instruction for exceptional and multilingual learners, and design strategies in the teaching of writing that attempt to shift the control of literacy from the teacher to the student.

Several types of writing are explored over the course of the semester including narrative, functional, persuasive, expository, and poetry. While students produce short representative assignments in each genre, a considerable amount of time is devoted to narrative writing. My motivation for devoting time to narrative writing rests in the transformative potential of telling stories about our lives, as well as the key shifts in the language arts curriculum toward greater learner engagement in informational reading and writing as commanded by the national move toward Common Core State Standards (CCSS), now adopted by 46 states and the District of Columbia, disproportionately requiring more evidence-based, technical writing.

It was during the narrative genre that I launched a capstone project that required students to write and illustrate their own children's book. Writers are introduced to a number of illustration tools and the building blocks of narrative writing that result in stories which take a variety of forms including fantasy, fractured fairytales, humor, satire, and realistic fiction. There are only a few standard elements required with respect to the anatomy of all published books. These include front matter such as a title page, copyright statement, acknowledgements, and dedication, in addition to end matter such as an afterword that explains the motivation for the story, expounds on the theme, or offers suggestions for instructional use. Other than that, ingenuity and creative expression are encouraged.

Upon completion, students are given several options for physically publishing their books. These include using online book creators such as Bookemon, Mixbook, Blurb, Snapfish, and Picaboo, all offering soft and hard cover binding options. Several iPad apps and web-based programs for storytelling that have been emerging on the market were also introduced; however, over the last four years nearly all students preferred to create bound books, many of which they gifted to family, mentor teachers, and friends at the holidays (as the course ends in December).

Since the start of the course, my shelves continue to fill with an extensive and delightful collection of children's books authored by pre-service teachers. Over the years these stories have engaged us, connected us, educated us, lifted our spirits, generated meaningful conversations, or simply entertained. Yet, the process did not come easily to all students who had to slay a few writing monsters before they triumphed. This work

describes my experience with teacher candidates in an elementary writing instruction course as first-time authors of children's books, in particular focusing on a writing workshop approach in which the writing conference functions as an effective technique to scaffold writers through the writing process. The paper provides a descriptive account constructed from four years of anecdotal data and student feedback on course evaluations, with the intent of providing the reader as vicarious of an experience as possible in order to generate discussion, inform instruction, or derive personal meanings from my classroom experience.

The theoretical premise upon which this case is built is that writing is an inherently recursive and creative process that is facilitated by a meaning-centered learning environment that more often results in students making meaningful knowledge constructions.

The Writing Monsters

The idea of writing their own children's book initially sounded intriguing to my students; however, the thought of a project that may well take them through the end of the term was equally daunting. It was not long into the term before several writing monsters reared their fuzzy heads. In collaboration with my teacher candidates, we cleverly named them for effect, and even feature them in a digital story that could be used as an instructional tool. Meet Bashful Bandit, Hairy Houdini, Vincent Van Troll, Frankenline, Edgar Allen Go, and the infamous Blanche Pagé (See Table 1). The writing monster profiles were crafted from my classroom observations and represent the writing challenges and fears that my students encountered and had to conquer in writing their stories. I now use the writing monsters theme as an introductory hook first inspired by Fletcher's (2010) advice to young writers, as an entry to one of our first lessons on what it means to be a writer.

Over the course of the last four years, I repeatedly encountered reluctant writers who manifested their struggle with these writing monsters in both overt and subtle ways. For instance, these are writers who approach the project grudgingly, frequently express self-criticism, and lament that they have nothing to write about. Most reluctant writers also practice avoidance, make entries in the writer's notebook only on demand, or excuse themselves during independent writing to tend to various personal matters, and other seemingly inconsequential business. They are also averse to peer editing, respond to the first constructive critique of their work by wanting to change their story, or claim that they simply do not enjoy writing. Collectively, struggling writers exhibited a form of *learned helplessness* (Seligman, 1975), a lack of motivation resulting largely from self-doubt.

These patterns of behavior brought me back to the instrumental work of Gloria Ladson-Billings (2002) who observed urban classrooms and witnessed a few related forms of resistance, and moreover, the habit of outwardly empathic teachers giving certain students "permission to fail" (p. 110). Ladson-Billings describes this practice as allowing a pattern of avoidance, rather than demanding success. In the following excerpt Ladson-Billings (2002) provides a representative example of a teacher who she concludes is ultimately shortchanging Shannon, a young learner who has been given a prompt to write a sentence describing something special that happened over a weekend, but refuses:

> After a few minutes one of the teachers comes by this table and notices that Shannon is just sitting while others are working at constructing the sentence. 'Would you like to try writing your sentence today, Shannon?' Shannon shakes her head no, arises from the table and begins to wander around the room. The teacher says to her as she begins wandering, 'That's okay. Maybe you'll feel like writing tomorrow.' This is not an isolated incidence. On a previous visit, my coinvestigator witnessed Shannon talking with Audrey [another student at her table]. Audrey asked Shannon what she was writing. Shannon snapped, 'I ain't writin' nuttin'!' Although most students were encouraged to write each day, Shannon was regularly permitted to fail. (p. 110)

When I first initiated the children's book assignment as a capstone project, I had a tendency to respond to reluctant writers in two ways: 1) indiscriminately peppering hollow praise as a form of positive reinforcement and 2) with shared commiseration because I knew that the project was consuming an inordinate amount of their time. Furthermore, I found myself applying principles of behavior analysis that I had been critiquing in another course under the pretext of Alfie Kohn's work – especially *Punished by Rewards*. As Kohn (2012) maintains, "Praise isn't feedback (which is purely informational); it's a judgment -- and positive judgments are ultimately no more constructive than negative ones (online)" (para. 4). In behavioral terms, I used high-frequency activities such early dismissal or a pass from writing in the writer's notebook as a reinforcer for the lower-frequency (i.e., less desirable) activity - independent writing during our writing workshop. I was allowing students to evade assignments and disrupt the process I wanted them to trust. I was letting them off the hook instead of encouraging them to work through their uncertainty. In doing so, I found myself – much like in Ladson-Billing's (2002) example – giving students *permission to fail*.

Table 1
Writing Monster Profiles

Name	Profile
Bashful Bandit	Seems like somebody already had his best writing ideas, so he is not sure what he can claim as his own. He is so worried about stealing others' ideas that he does not realize that the best story ideas live in him.
Hairy Houdini	An escape artist who is always trying to get out of writing by disappearing to somewhere else, tending to seemingly inconsequential business (e.g., polishing his handcuffs or scoping out new escape routes).
Edgar Allen Go	Thinks he does not enjoy writing and makes a mad dash to the finish line, unable to trust the process and take the time to explore the craft of writing.
Vincent Van Troll	Looks for increasingly extreme measures to inspire his creativity; he feels as though he simply cannot make the cut.
Frankenline	Thinks that all his lines are ugly and is reluctant to share his writing fearing that an angry mob of torch-bearing classmates will chase him down the halls.
Blanche Pagé	Suffers from writer's block and can never figure out how to get started.

Observing them through an anthropological lens, and suspending judgment for a time being, I became mindful of the fact that my students enter the course with an educational history characteristic of Freire's (1972) *banking education* and a preference for assignments that result in immediate gratification over project-based learning requiring prolonged and more in-depth inquiry. After celebrating the first book exhibition showcasing my students' ingenuity and creative expression, the notion of *learned helplessness* (Seligman, 1975) that recurrently presented itself during the writing project became a teachable moment for me: I had to trust the process, much like I was insisting of my writers. Furthermore, I needed to tailor instruction to better meet the needs of all writers so that they may realize their full creative potential. That meant a learner-centered environment in which active learning and inductive instructional methods are primary characteristics. In my experience, the writing workshop is the most effective instructional approach in preparing teacher candidates to develop a repertoire of skills to teach writing. My method of inquiry is grounded in a constructivist approach to assessment and serves as the basis for the instructional modality described herein.

A constructivist approach to assessment involves a variety of formal and informal assessment techniques with an emphasis on formative assessment; that is, a diagnostic type of assessment marked by non-evaluative, ongoing qualitative feedback designed to monitor student progress and redirect learning as needed (Anderson, 2005; Andrade & Cizek, 2010; Fletcher & Portalupi, 2007; Heritage & Popham, 2013; Johnston, 1997; Marzano & Hefleboer, 2012; Marzano & Toth, 2013; McMillan, 2007; Popham, 2013).

Drawing on Bloom's Taxonomy (1984), higher order thinking skills are also emphasized in a constructivist approach to assessment, and accordingly, require a more dynamic level of contextualized learning to facilitate understanding and develop requisite skills. In the process, students build understanding through an experiential and reflective experience, as suggested in the case herein.

Scaffolding, or the gradauted but temporary support given to students during the learning task and then removed as the learner becomes more independent, is another characteristic of a constructivist approach to assessment. Scaffolding theory was first introduced by cognitive psychologist, Jerome Bruner (1960), and is often erroneously attributed to psychologist Lev Vygotsky who did not lay claim to the term *scaffolding*, but conceptualized learning much in the same way. To date, few empirical studies offering a thick description of scaffolding can be found in the extant literature. In my interactions with students, the process of the writing conference - is in itself – a form of scaffolding and expanded in the forthcoming section.

A constructivist approach to assessment likewise involves a collaborative and bi-directional learning relationship in which the ongoing assessment practices inform instruction (Popham, 2013). For me, a contructivist approach to assessment requires entering a classroom as both ethnographer and cultural anthropologist and learning about my students as though they are a new culture, from one semester to the next. Through observation, anecdotal notes, a running record, an analysis of the artifacts that students produce, and critical self-reflection, I continue to inform my understanding of learners and refine my instructional practices to support them. In the following section I draw the reader into my classroom to unpack the writing process.

The Writing Process

I implemented the writing workshop method of instruction pioneered by Donald H. Graves and more recently attributed to Lucy M. Calkins, professor of children's literature and founding director of *Teachers College Reading and Writing Project,* and championed by others like writer Ralph Fletcher (1993, 1996), author of books on the craft of writing, and the late Walter Dean Myers, author and national ambassador for young people's literature. The writing workshop is organized according to Figure 1.

Each class session begins with whole group instruction in the form of a mini lesson during which I focus on one teaching point at a time. With respect to the narrative genre, mini lessons focus on the craft of writing regularly modeled through the use of mentor texts as instructional support tools to help writers hone their craft. Whether it is *Nothing Ever Happens on 90th Street* (Schotter, 1997) to teach about noticing the world around us, *The Kissing Hand* (Penn, 1988) to demonstrate how authors can stretch a moment across the page, *Punctuation Takes a Vacation* (Pulver & Beach, 2003) to depict a world without proper conventions, or *Voices in the Park* (Browne, 1999) to show how stories are told otherwise depending on perspective, mentor texts teach craft techniques and help shape writers.

Each mini lesson is followed by independent writing, to which a substantial portion of class time is dedicated. During independent writing students brainstorm, write, edit, and confer with writing partners or with me. Routinely, lessons conclude with a brief author's chair, giving writers an opportunity to share stories in progress and / or final products while welcoming concrete feedback from their peers.

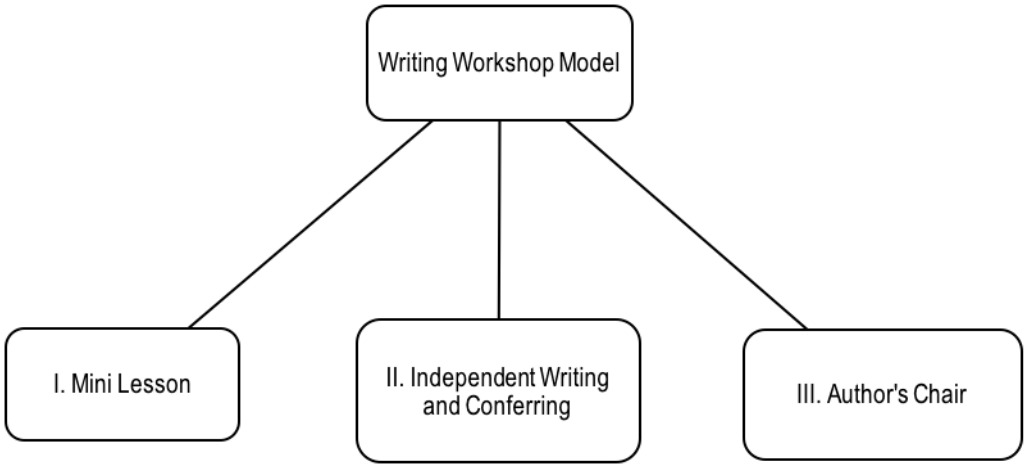
As noted above, the writing workshop is intended to be learner-centered, an environment in which active learning and inductive instructional methods are fundamental characteristics. In the context of this student-centered approach, I also encourage a meaning-centered (see Kovbasyuk & Blessinger, 2013) atmosphere for writing; that is, a classroom environment that encourages students to draw something meaningful from their everyday lives and use it as a springboard or motivation for learning – or in my case, writing. In doing so, I frequently echo educator and writer Ralph Fletcher's edict that the best story ideas are burrowed in us. To that end, I use the metaphor of the *maleta,* a Spanish term for suitcase, to reinforce the idea of meaning-centeredness in the learning process. A *maleta* represents a reservoir of the cultural and social experiences that students bring to school. When viewed as assets and affirmed, the contents of a *maleta* can serve as "funds of knowledge" or resources for educators in preparing culturally responsive and meaningful lessons (Moll, Amanti, Neff, & Gonzalez, 1992, p. 133; González, Moll, & Amanti, 2013). As a primer to the narrative genre, I have students construct a *maleta* and fill it with clippings and other symbolic representations of their experiences that can be used as story seeds. These objects might represent dreams, wonderings, special places, important events or milestones, family stories, and other joyful or even frightening events that continue to linger or have been definitive in their lives. I may also launch the writer's workshop with writing prompts, one in particular entitled *What We Carry* (or variations thereof), during which I ask students to choose an artifact from their maleta and write a short vignette about it. Inspired by Tim O'Brien's (2009) collection of short stories about the Vietnam War in *The Things They Carried,* this launching activity is one way students can practice descriptive writing and playing with words. In short, I encourage students to take their writer's notebook in one hand and their *maletas* in the other as an entry to the writing process.

The writing workshop as described herein is primarily implemented at the elementary grade levels and not commonly reported in the academic literature as an approach to teaching writing in higher education. Nevertheless, I wanted to engage my teacher candidates in the writing process, much in the same way that they might engage their own students. While the workshop approach is a worthwhile way to teach writing, it is also pedagogically demanding. Writing conferences as a form of assessment significantly facilitated my efforts.

Conferring as a Form of Assessment

I suspended the use of analytic rubrics to assess my students' writing pieces after one long summer of reflection and perhaps as a small act of resistance against the narrowing definitions of teacher competency and the growing number of rubrics in use to evaluate teacher candidates. Making this decision as our teacher candidates were about to enter a field where more rigorous accreditation standards, curricular mandates, and assessment prevail, seemed like errant behavior. On the contrary, I observed a marked improvement in the substance of the children's books compared to their early work under the weight of rubrics with no discretionary aspects. In the beginning, it was apparent that students were heavily focused on my evaluation of their stories and less on the craft of writing. If writing was going to be a recursive and creative process, using analytic rubrics with narrow criteria and levels of performance to grade writing was reductionist in nature and weakened the heart of the writing process. Initially, some students could not loosen the grip on rubrics and found the ambiguity that resulted in placing less emphasis on formal assessments during the writing

Figure 1
Writing Workshop Components



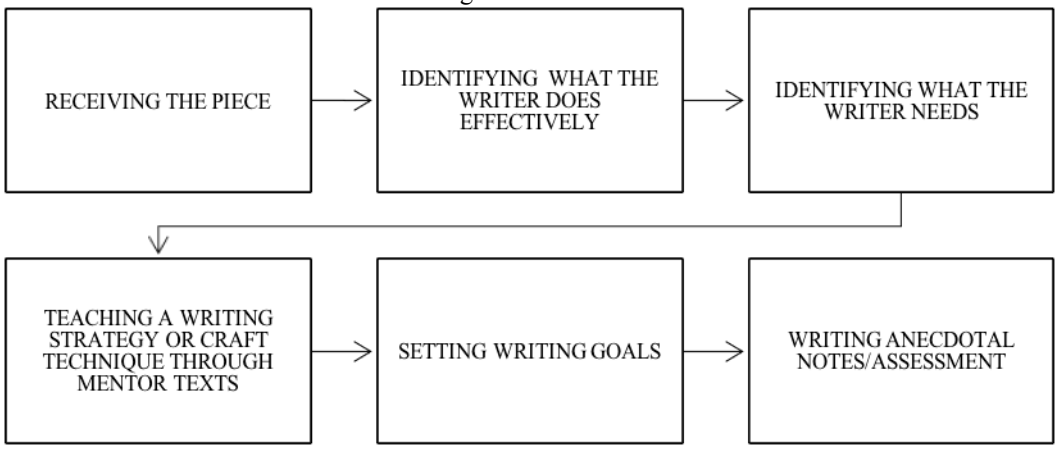
process disconcerting. To provide students with some measures of success, I implemented a holistic rubric as a summative assessment to grade the capstone project. In contrast to an earlier analytic rubric in use, this type of rubric is designed to provide writers with a wider description of the characteristics that exemplify a level of performance and emphasizes what they can demonstrate rather than their shortcomings. For instance, the holistic rubric that was applied as the summative assessment is focused on the building blocks of the narrative genre (e.g., setting, characters, rising action, plot, climax, falling action, point of view, theme, conclusion) and the extent to which each element of the narrative genre is developed.

The primary diagnostic tool or form of assessment of student writing was accomplished through writing conferences, or conferring, as otherwise recognized in the literature in the field of language arts. As described earlier, in the practice of conferring as a primary form of assessment I embrace a constructive literacy approach (Anderson, 2005; Johnston, 1997) within which the assessment of student writing is designed to offer ongoing targeted feedback and incremental goals for improvement, as well as guide subsequent re-engagement lessons. In the process, I build my students' stamina as writers, improve my *assessment stance* (Anderson, 2005; Johnston, 1997) and overall effectiveness as an instructor of elementary writing instruction, and better meet the learning outcomes of the course.

At first, the writing conferences served more or less as benchmark points to loosely gauge progress – essentially an informal assessment practice of floating around the classroom and proving emotional support or positive reinforcement. I restructured the manner in which I conferred with students and began to function mainly as a writing coach who learned to focus more on the writer than the writing - sage advice heeded from the work of Calkins and Fletcher. As I continued to refine the role, I was able to differentiate (or tailor) writing instruction, which in turn diminished the range of struggles students were experiencing.

Influenced in large part by the work of Fletcher and Portalupi (2001) as well as Calkins, Hartman, and White (2005), I set up the architecture of the writing conference to take the form in Figure 2. I reserve time for conferences during each class session, and unlike earlier in the course where I roved around the room, I meet with only four or five students, depending on the length and frequency of class meetings. The conferences are relatively short, lasting anywhere from five to ten minutes, and are conducted across phases of the writing process including prewriting, drafting, revising, and editing. I also confer with students outside of class. While in class, I confer with students during the independent writing portion of the class, designating a small meeting space in the back of the room, or as the physical environment allows from one semester to the next. I determine with whom I confer by maintaining a status of the class chart on which students insert name cards to indicate where they are in the writing process. On some occasions, I simultaneously organize peer-to-peer conferences that students arrange with writing partners. I provide students with a peer-to-peer conference guide so that the conversations are productive. During this time, the room gently buzzes. When I confer with students, I begin with the important ritual of *receiving the piece*, originally a peer response

Figure 2
Writing Conference Process



strategy developed by Graves (1983), then proceed to act as a writing coach, assess, and re-engage struggling writers.

For me, *receiving the piece* means giving the writer an audience (whether a teacher or peer) and listening to him or her read a writing piece at various stages of the writing process. I encourage my writers to receive one another's writing with a spirit of generosity and in doing so extend the same nonjudgmental feedback that they wish for themselves. Oftentimes students are hesitant to share their writing because it requires some risk-taking (something that does not come easily to all students), and as such, appreciate an accepting audience. In *receiving a piece,* I put corrective tendencies aside and describe the effect that the writing has on me as a reader, and not as an instructor. This protocol became an important starter to the writing conference because it validated my students' writing and their emerging voices as writers. It is also an opportunity to ask questions that may help expand the writing. In doing so, I periodically draw on my qualitative research skills in interviewing wherein I position myself as learner and exhibit a degree of naiveté, along with the practice of analytic listening.

Secondly, I focus on what the writer needs and one teaching point or language function at a time, whether it is a story lead, falling action, or a writing strategy such as crafting "golden lines," described by Fletcher (2010) as a "sweet sentence that makes you sit up straight, go back, and read it all over again" (pp. 108-115).

Thirdly, during each conference I sit side-by-side the writer signifying that a collegial interaction is about to take place. I also have green, yellow, and pink highlighters ready for use. A green highlighter is used to mark the effective use of craft traits and what the writer does well, the yellow to highlight suggestions and elements of writing in need of revision, and pink to indicate underdeveloped parts or draw attention to writing conventions such as grammar, punctuation, spelling, and overall readability that need to be addressed later during the editing phase.

To give the reader a sense of the dialogue, a selective transcription of a conference with a writer at the revision phase of the writing process is provided in the Appendix. After reflecting on this writing conference and others, I added my journal notes to highlight certain common practices of which I became more aware and proficient in, with each new cohort of students. In the process of reflecting, I grew more conscious and empathetic of the vulnerability students experience in sharing their writing with me. The nature of this particular conference is representative of others throughout the course of the semester.

First and foremost, writing conferences such as the one with Muna, were conversational and primarily about writing. However, an undercurrent of writing conferences is helping students gain self-esteem as writers, but doing so through scaffolding or graduated instruction, as I hoped to have done with her and others.

In the absence of analytic rubrics, I maintain anecdotal notes to document student progress. Initially, I wrote anecdotal notes in a semester-long reflective journal. Given the abundance of emerging software, web-based resources, and digital tools to support instruction, I also play-tested a few iPad applications to keep records of my writing conferences with students. One of these applications currently in use is *Explain Everything*, which functions as a small interactive whiteboard on the iPad wherein a user creates a screencast of a tutorial or instructional video to teach a concept, explain a problem, or draw a diagram. The narrated screencast can be exported by way of social

media, email, Dropbox, or a Safari link. Unlike others, Explain Everything supports Word documents and PDF files, making it convenient to import students' writing pieces and comment on them during a writing conference. Since my introduction to this screen-casting tool, other apps designed specifically for reading and writing assessment were unveiled, which I continue to playtest for utility. One of these is *Confer,* an electronic conference notebook that is helpful in organizing conference notes and tracking student progress. In this app I document students' strengths, my teaching points, and set goals for the next writing conference. I can also upload data to a spreadsheet making it easier to code and look for patterns across conferences.

The writing conference is a valuable feature of the writing course described herein because it enables me to tap into students' maletas and discover their interests, as well as better understand their cognitive processes. Through these one-on-one semi-structured conversations, I am able to tailor the writing process so that writers feel successful in the larger endeavor.

Author's Chair

In place of a final exam, the writing course is capped by a celebratory book exhibition – the grand author's chair. During the exhibition, authors and their invited guests float around the room and take their time reading the assortment of books featured proudly on table-top easels. A stack of comment cards is placed beside each book so that authors can receive feedback other than my own. The most meaningful aspects of the end-of-semester book exhibition are when authors volunteer to do read-alouds in the coveted author's chair. These instances are videotaped and serve as sources of visual data or artifacts that candidates may subsequently add to their digital portfolios. Selected images from the books my students published are featured in a flipbook that can be accessed at the following URL: http://animoto.com/play/J9jPq0uvVGSnM7S01RAUfQ

These images capture the rewards that came from taking creative risks and trusting the process. In each story, the author's plot line and character arc are drawn from meaningful, real life experiences, affirming educator and writer Ralph Fletcher's advice to writers that the best story ideas live within us. It is by trusting the process in the writing workshop that such stories can emerge.

Student Feedback

Upon completion of the course, I asked students to respond to two prompts either as a last entry in their writer's notebook, on the course evaluations, or online: Describe the overall effect that the writing approach and/or overall experience in the writing instruction course had on you personally. And, in what ways might the experience in the writing instruction course shape your view of teaching writing? A review of the feedback collected from students over the last four years validate my implementation of the writer's workshop approach to preparing teacher candidates to be thoughtful writing teachers. Several representative comments are provided. For instance, Maddie comments on her commitment to and investment in the project, alluding to the intrinsic rewards that can come from project-based learning:

> The most satisfying aspect was the way my book turned out, and how I worked on my book all semester. The late nights and all the changes that I made to it were well worth it, because in the end my book came out exactly the way I wanted it to turn out. I am so proud of myself. I did not think that I had it in me to write like that and produce my own children's book. . .I could not have asked for a better project to show me what I got.

In the process of building her narrative and gathering historical material from her parents to shape it, the writing experience was authenticated for Ajša, suggesting the importance of motivating students by planning writing assignments that enable meaningful connections:

> I have never been asked to do a project like that… I did not know what to think at first… but it was the single most important writing that I have ever done because I was able to learn things about my family history that I did not know... I have a new appreciation for my parents and their struggle coming here [the United States] with next to nothing… and the sadness that they feel every time they talk about [home]. I will never forget how that moment when I gave my dad a copy of my book he teared up and my mom ordered copies for everyone.

Ellen looks back on the experience of writing her book and surrendering to the process. In discovering her untapped capabilities and taking pride in her published book, she also contemplates the benefits of nurturing a love of writing in her future students through a tactile, experiential approach:

> It's something you have to do to understand. Every week there was a moment that taught me something textbooks couldn't and something about myself. I don't know how kids could possibly like to write with all the scripted lessons that we have to follow. We're going to have a generation of kids who hate to write… I'm one

> of them. . .I'm convinced that something happens in the brain chemistry when students are allowed to be creative and write as it did for me. It didn't happen right away but once I let myself go to the process, it took me to another place artistically and emotionally too... I could have worked on the book all semester. Wait, I think I did!

Similarly, Simone saw value in the writing experience despite her frustrations with aspects of writing her book. She learned to navigate the terrain which resulted in not only an appreciation of the circuitous process that stretches a writer, but a book that may one day connect her to her family in ways unforeseen:

> I was visited by every writing monster we talked about in class but I made friends with them and succeeded! It was a worthwhile project because after some trials and tribulations I created something that I treasure that is part of me and will pass on to my grandchildren someday.

Ruby recollects her earlier schooling experiences and reinforces the idea that assessment should be individualized and respond to the needs of each writer. This struck me as a particularly important observation given the demographics, range of early literacy experiences, linguistic diversity, and students with special needs who will require writing interventions, to be encountered across the classrooms in which she will be teaching:

> I know that when I was younger I was a reluctant writer and it was mainly because I felt like my writing wasn't good enough, especially since no matter how hard I tried I always received an "okay" grade for what I wrote. It was as if nothing was good enough and it was very discouraging because I didn't know how to get a better grade. After a while I didn't care anymore. It was also hard to start writing because I could never find things to write about, or the topics weren't relatable so that also made writing difficult… I think the way we did it was extremely helpful.

As a teacher, Lauren intends to draw on her own struggles during the writing process as opportunities for teachable moments to inspire writing that is both purposeful and meaningful:

> I will use my own reluctance and my final outcome to inspire kids. I will also encourage students to really think about what means something to them rather than write just to write which is what I was doing at first.

Simon reached a similar conclusion:

> I want [my students] to experience that same joy that I did. I want them to be proud of their writing and I want them to be able to show it off and I want them to learn that it is not going to be perfect the first time. That it takes mistakes and changes throughout the writing process before they get to the final product.

In envisioning her future practice, Anna Lisa comments on the importance of recognizing the vulnerability her writers may experience in sharing their writing, a position that was also revealed during writing conferences:

> I would want [my students] to be happy with what they have written and not to be embarrassed of their writings to the point where they won't want anyone to read it. I was like that and I dreaded it [sharing writing in progress] but it got to be something really useful when I realized that I wasn't going to be marked down but that it was a real chance for me to be respected as a writer… My vision is to create an atmosphere of where my students don't feel embarrassed of their writing and motivate each other like my classmates did and my writing partner did.

Frankie's own vulnerability made him cognizant of the writing monsters his own students may also encounter:

> I will try to give them positive reinforcement and concrete support like we did during the writing conference. For some reason that seemed to be key with me. Instead of being put down on what I did wrong, [I was] showed little tweaks that made the story better.

Max suggests that every writer can develop his or her voice and in the process writing can have transformative potential: "My expectation is that each writer will find their own style and be able to share that ah ha moment when they realize that they were writers all along." Francine's position as a future writing teacher is simple and elegant: "Children need someone who holds no barrier."

Upon further reflection on my experience with reluctant writers, my understanding is extended by Mackiewicz and Thompson's (2014) timely quantitative microanalysis of cognitive scaffolding in a writing center. Drawing on a random selection of ten highly rated conferences, they coded for effective tutoring strategies that were organized into three categories including instruction, cognitive scaffolding,

and motivational scaffolding. For instance, Mackiewicz and Thompson describe the most frequent strategies applied by tutors to help writers achieve their goals: telling (instruction entailing targeted advice), pumping questions (cognitive scaffolding entailing prodding for ideas), suggesting (instruction), and showing concern (motivational scaffolding) (p. 65). In their study, the analysis of discourse in particular, helps to better frame, analyze, as well as validate my approach in scaffolding struggling writers through the writing process. Furthermore, Mackiewicz and Thompson's conclusions enhance the theoretical premise upon which this paper is built and contributes an additional theoretical construct that both problematizes – or sophisticates - the notion of scaffolding described herein.

I also appropriate Robert Kegan's (1995) theory of meaning-making development which he conceptualizes as a self-evolution that takes place from adolescence through adulthood. Kegan (1995) emphasizes the need for educators to build developmental bridges (akin to scaffolding) in the process of students' self-evolution and is worth quoting at length:

> If our curricular aims… are somewhat over the head of the entering student, then we must build a transitional or bridging context… that is both meaningful to those who will not yet understand that curriculum and facilitative of a transformation of mind so that they will come to understand that curriculum. We cannot simply stand on our favored side of the bridge and worry or fume about the many who have not yet passed over. A bridge must be well anchored on both sides, with as much respect for where it begins as for where it ends (p. 62).

Kegan's constructive-developmental theory is instructive in understanding how to establish a meaning-centered and meaning-making classroom as a means of enhancing student learning towards self-actualization that was inferred from my students' summative remarks.

In subsequent reiterations of this work, I endeavor to continue to draw across disciplines and make interdisciplinary connections to deepen my understanding of the behaviors of the reluctant writers discussed earlier in this paper and further inform my preparation of the next generation of writing teachers for the K-12 classroom.

Conclusion

The aim of this paper was to provide a retrospective account of my experiences with teacher candidates in elementary writing instruction as first time authors of children's books who had to slay a few writing monsters over the course of the semester in order to feel successful in the larger endeavor. It reinforces a writer's workshop approach to teaching writing, highlighting the practice of conferring with writers as a valuable form of assessment because it allows an instructor to scaffold students in a manner that supports both the fears and cognitive differences students present, as well as the recursive nature of writing. Through this approach I hope that my students will find the time to reflect on their own writing so that they may, in turn, anticipate the needs of the learners with whom they will be working. As educator Mem Fox (1993) writes, "If you are not a writer, you will not understand the difficulties of writing. If you are not a writer, you will not know the fears and hopes of the writers you teach" (p. 163). I also hope that my experience with anxious and reluctant writers serves a paradigmatic or illustrative purpose that may inform other academicians and professionals in their respective fields, in the best interest of students.

Despite my best efforts, in the last two years state-mandated teacher certification requirements such as a new (and highly contested) field assessment known as edTPA, three new exams, more rigorous accreditation standards, and a move toward Common Core State Standards (CCSS)—a Washington driven national K-12 curriculum—have significantly shaped the work that my colleagues and I do with teacher candidates. In response to raising the bar for accreditation, it is becoming increasingly more challenging to utilize our classrooms to nurture creativity and innovation, open minds, search for understanding, and engage constructivist practices such as those described herein. Perhaps of equal importance is a dialogue about how to prepare K-12 students for a globally interconnected society where the value of creative writing has increasing value but is being overshadowed by a shift to more evidence-based, technical writing and a general approach to language arts characterized by Dave Coleman, a lead author of the CCSS, as "read like a detective; write like an investigative reporter" (p. 4). In and of themselves, these skills are not without value. However, the consensus among educators is that the CCSS favor a skills-centric curriculum that will drive out the arts, literary and cultural knowledge, as well as writing in a wide range of genres. A new crew of writing monsters might soon rear their fuzzy heads.

References

Anderson, C. (2005). *Assessing writers*. Portsmouth, NH: Heinemann Educational Books.

Andrade, H., & Cizek, G. J. (Eds.). (2010). *Handbook of formative assessment*. New York, NY: Routledge.

Browne, A. (1999). *Voices in the park*. New York, NY: Dorling Kindersley Publishing.

Bruner, J. S. (1960). *The Process of education.* Cambridge, MA: Harvard University Press.

Calkins, L. M., Hartman, A., & White, Z. (2005). *One to one: The art of conferring with young writers*. Portsmouth, NH: Heinemann Educational Books.

Coleman, D. (2011). *Bringing the common core to life*. Retrieved from at http://usny.nysed.gov/rttt/docs /bringingthecommoncoretolife/part4transcript.pdf

Du Maurier, D. (1971). *Rebecca*. New York, NY: Avon.

Fletcher, R. (2010). *Live writing*. New York, NY: Harper Collins.

Fletcher, R., & Portalupi, J. (2007). *Craft lessons: Teaching writing K-8*. Portland, ME: Stenhouse Publishers.

Fletcher, R., & Portalupi, J. (2001). *Writing workshop*: *The essential guide.* Portsmouth, NH: Heinemann.

Fletcher, R. J. (1996). *Breathing in, breathing out: Keeping a writer's notebook*. Portsmouth, NH: Heinemann.

Fletcher, R. J. (1993). *What a writer needs*. Portsmouth, NH: Heinemann.

Fox, M. (1993). *Radical reflections: Passionate opinions on teaching, learning, and living*. San Diego, CA: Harcourt Brace & Company.

Freire, P. (1972) *Pedagogy of the oppressed*. Harmondsworth, UK: Penguin.

González, N., Moll, L. C., & Amanti, C. (Eds.). (2013). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. New York, NY: Routledge.

Graves, D. H. (1983). *Writing: Teachers and children at work*. Exeter, NH: Heinemann.

Heritage, M., & Popham, W. J. (2013). *Formative assessment in practice: A process of inquiry and action*. Cambridge, MA: Harvard Educational Press.

Johnston, P. (1997). *Constructive literacy assessment*. York, ME: Stenhouse Publishers.

Kegan, R. (1995). *In over our heads: The mental demands of modern life*. Cambridge, MA: Harvard University Press.

Kohn, A. (2012, February 3). Criticizing (common criticisms of) praise. *Huffington Post*. Retrieved from http://www.huffingtonpost.com/alfie-kohn/criticizing-common-critic_b_1252344.html

Kovbasyuk, O., & Blessinger, P. (2013). *Meaning-centered education: International perspectives and explorations in higher education*. New York, NY: Routledge Publishing.

Ladson-Billings, G. (2002). I ain't writin' nuttin': Permissions to fail and demands to succeed in urban classrooms. In L. Delpit & K. Dowdy (Eds.). *The skin that we speak* (pp. 107-120). New York, NY: The New Press.

Marzano, R. J., & Toth, M. D. (2013). *Teacher evaluation that makes a difference: A new model for teacher growth and student achievement*. Alexandria, VA: ASCD.

Marzano, R. J., & Heflebower, T. (2012). *Teaching & Assessing 21st Century Skills. The Classroom Strategies Series*. Bloomington, IN: Marzano Research Laboratory.

Mackiewicz, J., & Thompson, I. (2014). Instruction, cognitive scaffolding, and motivational scaffolding in writing center tutoring. *Composition Studies*, *42*(1), 54-78.

McMillan, J. H. (Ed.). (2007). *Formative classroom assessment*. New York, NY: Teachers College Press.

Moll, L. C., Amanti, C., Neff, D., & Gonzalez, N. (1992). Funds of knowledge for teaching: Using a qualitative approach to connect homes and classrooms. *Theory into Practice*, *31*(2), 132-141.

O' Brien, T. (2009). *The things they carried*. New York, NY: Houghton Mifflin Harcourt.

Penn, A. (1998). *The kissing hand*. New York, NY: Scholastic.

Popham, W. J. (2013). *Transformative assessment in action: An inside look at applying the process*. Alexandria, VA: ASCD.

Pulver, R., & Beach, J. (2003). *Punctuation takes a vacation*. New York, NY: Holiday House.

Schotter, R. (1997). *Nothing ever happens on 90th street*. New York, NY: Orchard Books.

Seligman, M. E. P. (1975). *Helplessness: On depression, development, and death*. San Francisco, CA: W.H. Freeman.

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Appendix
Annotated Script of a Writing Conference

Transcript	Reflective Notes
Me: Hi Muna [pseudonym]. How's your writing going?	*Sitting side-by-side signifying that a collegial interaction is about to take place.*
Student: I don't know. Fine, I guess (shrugs shoulders and smiles self-consciously).	*Get the writer talking about writing. Pinpoint how the writer can be supported. Acknowledge apprehension but emphasize process.*
Me: You don't know?	
Student: Yeah. I just read Lana's story and she's practically done with it… It's so good…	
Me: Tell me what you're working on… What specifically can I help you with today?	
Student: I don't know. Just making it a good story...	*Recognize that creativity is fragile. Empathy is important but avoid coddling. Place responsibility on writer and refer to mini lessons or draw on other instructional supports in which he or she can identify craft traits on his or her own as a way to respond to consternation and self-doubt.*
Me: What do you think makes a good story?	
Student: I don't know. That it's not boring... It sounds too serious. Like reading a history book… I'm not… good at this.	
Me: What were some of the gems or quotes from the readings that you wrote in your writer's notebook?	
Student: Fletcher said that…	
Me: OK, there you go. Let's work with that.	
Me: Would you read your draft for me, please.	*Receiving the piece. Allow student to read his or her writing as a way to take ownership of the writing.*
Student: OK, but it's not that good.	
Me: That's why we're here. I'm all ears!	*Avoid entertaining too much self-criticism and deflect quickly. Maintain momentum of writing conference.*
Student: reads draft	*Just listen. Don't write during this time as doing so can be unsettling for the writer and convey a purely evaluative encounter that can shut down the conversation.*
Me: You have some very special scenes so far. For instance, when you started to write about returning to [names country] for the first time in a long time… I can only imagine how that felt. In fact, as I was listening I was thinking of my own childhood… How did you feel in that moment you got off the plane? Or even before you got off the plane? What were you thinking? Or	*React as a reader, first and foremost. Avoid general, empty praise; point out something specific that is done well. Ask questions.*

Transcript	Reflective Notes
doing?	
Student: There were a lot of emotions… I was excited and nervous… I looked over at my Mom and I could see the mix of pain and joy in her eyes… because they weren't allowed to come back for a long time… Then when we got outside the wind was brutally hot… it was so humid…I was suffocating… seriously... It took me so long to iron my hair and I looked like a poodle the second I walked out…	*Get the writer to talk through the writing. During this time practice patient probing.*
Me: Haha… OK. Well Muna, there you go. Just like that! You brought me there a little more... You want to show the reader, don't just tell… Last week in class we talked about leads and rising action… Did you look at any of the mentor texts to see what the author does… and if there are some craft traits that can help you with your own writing?	*Focus on talk about writing. Graduate the instruction through conversation. Use own advice of showing the writer rather than telling the writer.*
Student: There was *The Things They Carried*, and another one, I think. I can't recall. The children's books.	*Use mentor texts as instructional supports. Tailor instruction and be ready with specific supports.*
Me: OK. I brought two more… Maybe this one since I've been listening to it on the treadmill and I thought it might help after reading your last draft.	
Me: Do you mind? (as book is handed to student.) Let me hear your best read-aloud voice, starting where I have the arrow markers.	*Keep student engaged. Allow student to do the work and/or most of the talking. Expose student to writing examples.*
Student: Last night I dreamt I went to Manderley again… peering closer through the rusted spokes of the gate I saw that the lodge was uninhabited. No smoke came from the chimney, and the little lattice windows gaped forlorn. Then, like all dreamers, I was possessed of a sudden supernatural power and passed like a spirit through the barrier before me. The drive wound away in front of me, twisting and turning… it was narrow and unkempt, not the drive that we had known... Nature had come into her own again and, little by little, in her stealthy, insidious way had encroached upon the drive with long, tenacious fingers… The beeches with white, naked limbs leant close to one another, their branches intermingled in a strange embrace, making a vault above my head like the archway of a church… No hand had checked their progress, and they had gone native now, rearing to monster height without a bloom, black and ugly as the nameless parasites that grew beside	*Muna reads aloud an excerpt from Rebecca by Daphne du Maurier (1971).* *The intent is to allow a writer to experience or react to a piece of published writing, to identify the writer's craft, to add texture to the writing conference, to allow the writer to be taken away in the moment.*

Transcript	Reflective Notes
them… I came upon it suddenly... and I stood, my heart thumping in my breast, the strange prick of tears behind my eyes. There was Manderley... secretive and silent… Time could not wreck the perfect symmetry of those walls, nor the site itself, a jewel in the hollow of a hand.	
Student: I love this...	
Me: Dreamy, right? I read somewhere that Daphne wasn't considered in the same league as other female novelists but she was a great storyteller. As a great storyteller, what does the author do here? How does she set the scene?	
Student: Like sounds effects and that?	
Me: Are they sound effects?	
Student: No… I was thinking about the *Rollercoaster* book and the exercise we did. I mean description... I felt like I could hear something because she created a mood...	
Me: Oh, OK, she does create a mood so vivid that maybe you can imagine some sounds… Specifically though… she's quite effective in one respect. Read a few lines that you like. Here, use a highlighter. I don't mind.	
Student: I like "I *passed like a spirit* through the barrier before me…" Also, "No smoke came from the chimney, and the little lattice *windows gaped forlorn*." And when she writes, "The beeches with white, naked limbs leant close to one another, their branches intermingled in a strange embrace, *making a vault above my head like the archway of a church*." [italics indicate phrases Muna underlined as she selected passages of her liking]	*Talk about writing techniques. Identify certain language functions in use.*
Me: I like that last line especially. That feeling of grandeur when looking up…	
Student: Oh yeah. She uses a lot of imagery. Similes and metaphors, right?	
Me: And sensory images. You got it. In such an ethereal way… It sets the mood. You're right.	
Student: Ethereal?	
Me: Mmmhm.	
Student: I like that and how she slows down the entire scene to tell it…	
Me: Agreed. Think about all the pivotal moments in your story… or your favorite memories… What are	*Bring it back to the writer's piece and pinpoint areas for*

Transcript	Reflective Notes
they?	*improvement.*
Student: Climbing the steps of the [monument]… the end of Ramadan… hearing the adhan over the loud speaker… sitting and talking to my grandmother.	*Allow room for self-evaluation. Have student identify areas for improvement in own writing.*
Me: I'd love to hear that conversation… What could you do with these?	
Student: Make the scene come to life… Add in the conversation… Would it be all right to add some [foreign] words for things?	
Me: Great. Yes, of course… as you like. To me, these are all golden moments in your story… Scenes that you can make come alive, as you say. You have an opportunity to tell a beautiful story about your native country and all those memories that you hold dear… Use the senses to describe. What do you see… hear… feel… smell…taste... Let's do this… Until our next writing conference, try rewriting the first significant scene… landing in [names country] after a 14-hour trip and heading to the family home. Take me all the way up to the front door, to jodedah's door.	*Identify one specific goal to be accomplished by the next conference.* *Express gratitude at end of conference.*
Student: I will. Can I send it to you this weekend?	
Me: I like your enthusiasm. The weekend is fine… Most importantly, thank you for sharing your writing with me.	
Student: Yay, thank you so much.	