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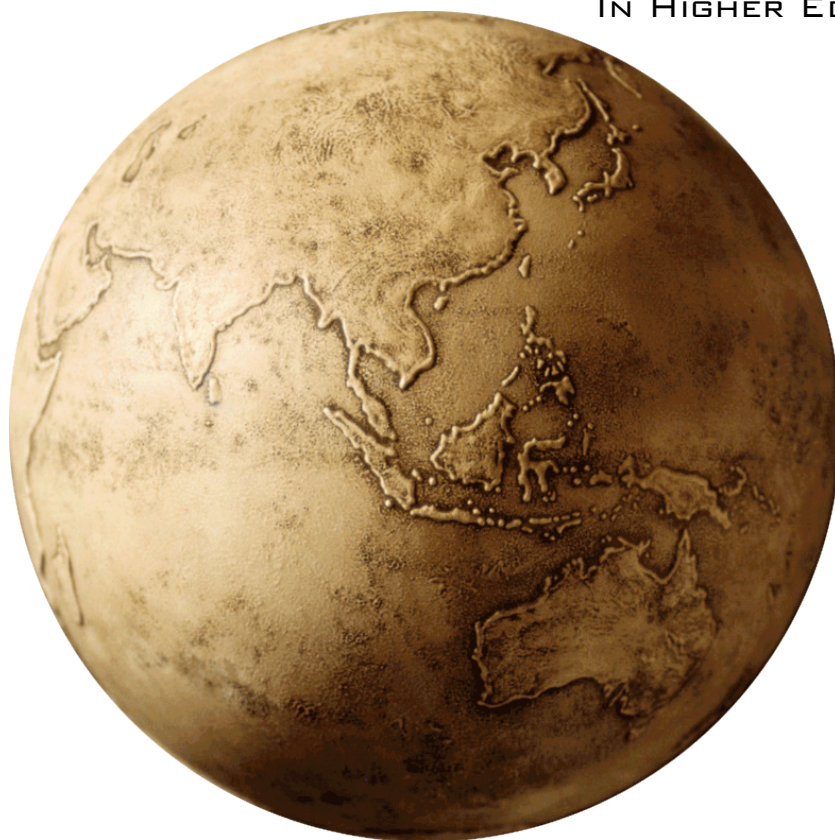
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Purpose

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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Submissions

The focus of the International Journal of Teaching and Learning in Higher Education is broad and includes all aspects of higher education pedagogy, but it focuses specifically on improving higher education pedagogy across all content areas, educational institutions, and levels of instructional expertise. Manuscripts submitted should be based on a sound theoretical foundation and appeal to a wide higher education audience. Manuscripts of a theoretical, practical, or empirical nature are welcome and manuscripts that address innovative pedagogy are especially encouraged.

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

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Research Articles

Instructional Articles

Assigned Positions for In-Class Debates Influence Student Opinions

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In-class debates are frequently used to encourage student engagement. Ideally, after researching both sides of the debate, students will form their own opinions based on what they have learned. However, in a large course of Environmental Science, opinions of students, when surveyed after the debate, were remarkably consistent with the position that they had been assigned. This study aimed to determine whether an assigned debate position influenced student opinion. Prior to being assigned a debate position, 132 students in Environmental Science were polled for their opinions on six controversial issues. Each student was assigned to a position, without regard to their opinion, for a debate on one of the issues. Students researched both positions and constructed arguments and counter arguments for both sides, but only argued one side of the debate in class. One week following the debates, students were again polled for their opinions. Prior to debating, only 41% of students happened to agree with their assigned position, yet following the debates, 77% of students agreed with their assigned positions ($p = 0.0000005$). This suggests that researching and/or arguing an assigned position in a class debate influences student opinion toward that position.

Active learning has been shown to increase student learning and retention in numerous situations (Bellon, 2000; Bransford, 1989; Kennedy, 2007). Active learning strategies can also improve student skills, such as critical thinking (Gervey, 2009). The educational debate is one form of active instruction, requiring students to prepare material, obtain evidence, create arguments, evaluate opposing data, and construct rebuttals (Bellon, 2000), resulting in greater mastery of the material. Debates have also been proposed as means of encouraging students to thoroughly learn both sides of a controversial issue. For example, Turner, Yao, Baker, Goodman, and Materese (2010) have shown that when individuals are expecting a controversy in debate as opposed to a general discussion, they spend more time learning the opposing viewpoint. Thus, educational debates are considered valuable tools in many social science curricula (Omelicheva, 2005).

Debates have not traditionally been a part of the curricula of the sciences. Yet, educated scientists often disagree on the solutions to complicated problems. This is especially evident in Environmental Science, where many potential solutions exist for a large number of environmental problems. Thus, in order to enhance student learning, foster critical thinking skills, and promote awareness of existing controversies, small group debates (12 students per group) were introduced to a large Environmental Science class.

Previous research has shown that students may change position after debate. One study found that 23 to 45% of students holding opinions contrary to their assigned debate position changed their views following in-class debates, compared to 22% of students who change opinion to agree with the professor's opinion after a lecture (Gervey, 2009). This indicates that debate could be useful in shaping student opinions. Ideally, after preparing material for both sides of the debate and participating in the two-sided debate,

students would be better able to form their own, well-informed, opinions.

However, after one semester, surveys showed a very large portion (83%, $n = 90$) of students expressed views that agreed with the debate position to which they had been randomly assigned. This indicates that students were not forming new opinions based solely on new material learned during the debate. Instead, the data indicate that students were more likely to take on the position that they argued during the debate, regardless of their initial view.

To explore this finding, a study was conducted using a large lecture course (144 students) of Environmental Science, where student opinions before and after in-class debate were evaluated in light of the debate position to which the student was assigned.

Methods

This study was conducted in a large, non-major, Environmental Science course with an enrollment of 144 students. The students comprised 53% female and 47% male. The course was organized with one group lecture section accompanied by six separate lab sections of 24 students each.

Debate Topics

To reduce complications due to any particular debate topic, six separate issues relating to current class material were debated. For each issue, students had already received a thorough introduction to the topic and a brief explanation of the conflicting opinions that exist within the scientific community. As advised in Bull's (2007) article on structured academic controversy, questions were chosen to which there were no clear "right" answers. The six issues debated were:

1. Are biofuels the solution to our current energy crisis?
2. Should we use a cap and trade system to control carbon emissions?
3. Should we increase our reliance on hydropower?
4. Should we increase our reliance on nuclear power?
5. Is organic farming the answer to feeding our growing population?
6. Should we burn our trash for energy (waste-to-energy transfer, WTE)?

Initial Polling

Students were initially polled on their opinions after lecture material on these topics had been presented. There was a minimum of one week and a maximum of four weeks between the lecture material and initial polling. Approximately 25 minutes of lecture was devoted to each topic, covering background and some brief scientific perspective for both the pro and con sides of each issue. Students were polled using a personal response system (i.e., clickers), by asking each question and permitting a simple yes/no response. Polling data were stored and not viewed by either the instructor or students until after the post-debate polling was completed.

Debate Preparation

Following the initial polling, students were assigned to a debate topic based on laboratory section and last name, with half of each section assigned to argue the "yes" position, and the other half assigned to the "no" position. Students had one week to prepare for their debates. They were encouraged to use their textbook, library resources, and the Internet to research their issue. While students knew which position they were assigned, they were instructed to research both sides of the issue. Every student was to prepare for both the yes and no positions. Based on research with at least three sources, each student was instructed to write a one to two page paper with a brief summary of each perspective, the top three justifications for each position, a rebuttal that could be used against each justification, and a rebuttal to that response. These assignments were due the day of the debate, and were graded on a 10-point scale with respect to completeness, thoroughness of research, and appropriateness of sources.

Debate

The debate was conducted in the structured method, similar to that used by Keller (2001), with the omission of audience questions as all students participated in the debates. For the debate, students separated into the "yes" group and the "no" group. They were given ample time to discuss amongst themselves which three justifications for their position were best. When ready, they presented these three points to the opposing team. Each team then had ten minutes to discuss their best rebuttal response to each of three points. After these were presented, the students had the opportunity to prepare and present rebuttals to the rebuttals. Following a final group discussion, each group then presented a final summary of their position, including the reasons that they felt were the strongest justifications for their position.

It should be noted that there was no focus on "winning" the debate. Instead, debates were focused on the collaborative nature of collective exploration (Bell, 2004). Students were instructed not to look for a winning or losing team, but to assess the information presented in the debate and use it to form their own opinions on the topic matter. It was specifically emphasized that students' personal opinions need not agree with the positions argued during the in-class debate.

Post-Debate Evaluation

One week following the debate, students were again asked for their stance (yes/no) on the issue that they had debated. These responses were then collated with their initial responses and the positions they were assigned to argue in each debate.

Results

Recording opinion change in this study required that students be present on three separate days to participate in the pre-debate survey, the debate, and the post-debate survey. On each occasion, several students were missing. Thus, data from only 90 students were usable for this study, with 69% female and 31% male. They were broken down as $n = 19$ for the biodiesel debate, $n = 12$ for cap and trade, $n = 14$ for Hydropower, $n = 17$ for nuclear power, $n = 16$ for organic farming, and $n = 12$ for waste-to-energy transfer.

On average, students prepared well for the debate. The average grade for the written assignments was 7.3/10 points. When later analyzed with respect to initial opinion, there was no difference in scores between students who agreed with their assigned position and students who did not (see Figure 1; 7.3 ± 3.3 and 7.4 ± 3.1, $p = 0.86$ in a two-tailed t-test).

Prior to the debate, only 41% of students expressed agreement with the position that they had been assigned. Following the debate, 77% of student opinions agreed with their assigned debate position.

Figure 1
Average Student Score on the Written Debate Preparation Assignment
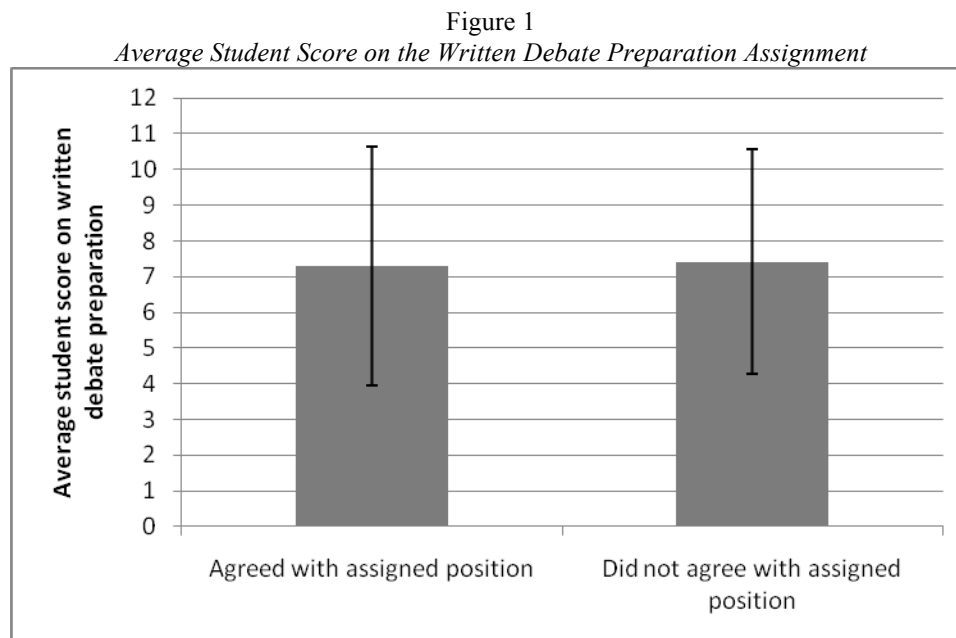
Note. Average student scores on the written debate preparation assignments were not significantly different with respect to whether the student agreed with his/her assigned debate position prior to the assignment. Averages 7.3 and 7.4, *SD* 3.3 and 3.1, *p* = 0.83 in a two-tailed t-test.

Thus, 60% of students who initially disagreed with their assigned positions changed their opinion to the assigned position (see Figure 2). This difference was highly significant in a chi-squared goodness-of-fit test ($p = 7.1 \times 10^{-12}$).

In all, 53% of students changed their opinion following the debate. Of these, the vast majority (84%) changed their opinion to agree with the position that they had been assigned to argue, while only 8.5% of students changed their opinion to disagree with the position they had been assigned. Women were slightly more likely than men to change their opinion to agree with the assigned position (54% compared to 44%), but this difference was not significant ($p = 0.19$, chi-squared goodness-of-fit test).

Overall, the *p* value returned by a t-test is highly significant, showing that students tend to change their opinions to agree with the position that they argued during the debate (see Table 1). When broken down by debate topic, no change was observed in student opinions on the use of nuclear power, and the change in opinion on waste to energy transfer was not significant, while changes in opinions were significant for the other four debate topics.

Discussion

We previously observed that after engaging in a debate activity, students seemed to change opinions to agree with an assigned debate position. This study was carried out to determine if students were statistically more likely to agree with their assigned position (i.e., whether they answered yes or no) following a classroom debate.

In the first semester, most students (83%) agreed with their assigned positions when surveyed one week after the debate. Because pre-debate opinions were not surveyed in those classes, it was not possible to say whether the students just happened to be assigned positions that agreed with their original positions. In this

Table 1
Percentage of Students Agreeing with their Assigned Debate Positions Before and After the Debate

Debate Topic	Percent Agreement		
	Before	After	p value
Biofuels	21.1	68.4	0.004
Cap and Trade	50.0	83.3	0.019
Hydropower	21.4	71.4	0.014
Nuclear Power	76.5	76.5	0.500
Organic Farming	31.3	87.5	0.001
Waste-to-Energy Transfer	50.0	75.0	0.096
Average	41.1	76.7	0.0000005

Figure 2
Agreement Between Student Opinions and their Assigned Debate Positions
Before and After an In-Class Debate
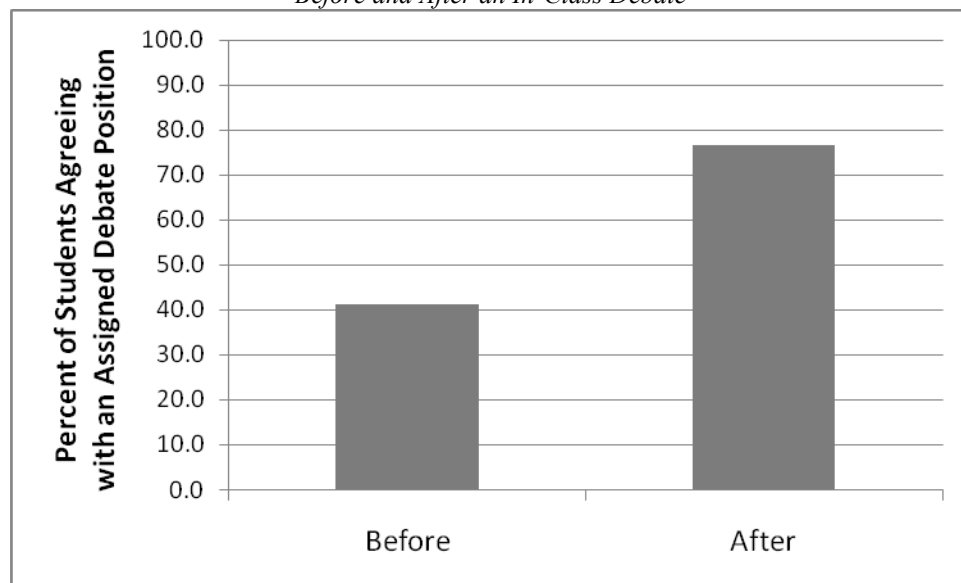
study, the pre-debate surveys showed that the prior opinions of only 41% of students happened to agree with the positions they were later assigned to debate, while after the debates 77% of students agreed with their assigned position. Thus, after the debates students were significantly more likely ($p = 0.0000005$) to agree with their assigned positions. This indicates that some aspect of the debate assignment had a profound influence on their opinions.

The students' tendency to change their opinion to agree with an assigned position is troubling. One of my objectives in using debates was to enable students to make informed decisions on important issues. This may have been the influence behind some shifts in opinion, but the directionality of the shift toward agreement with the assigned position, as opposed to towards either the yes or no position, should not have been so strong were students simply moving to the more compelling argument.

One worry in debates is that students will devote more energy to researching the position with which they agree, and therefore create a stronger argument for themselves. Indeed, prior research has shown that when observing debates, opinions are likely to be strengthened (Sears, 1964), not change. When preparing for a debate in which they will participate, individuals are more likely to seek information that validates their own opinions (Turner et al., 2010), and may even ignore information that contradicts their personal opinions (Bell, 2004). Such behavior in debates serves to reinforce students' existing opinions (Kennedy, 2007). If that were the case in this exercise,

students should have reinforced the positions that they held prior to the debate. Instead, they were likely to change positions.

It is possible that the students put more effort into researching the position they were assigned. To prevent this one-sided approach, students were forewarned of the debate format and of the opposing side's position, thus increasing their likelihood to thoroughly research both sides of the issue (Turner et al., 2010). Based on the written assignments they prepared in preparation for the debate, students did research both viewpoints. However, in a future debate, it might be advisable to not assign students to a position prior to the debate. Students would research both positions, and then be assigned to one team or the other only at the beginning of class. This would increase the chances that they would invest equally in their research for both positions.

It is also possible that it was not preparation, but the act of arguing for a certain position, that influenced the students' opinions. The act of debating has been shown to be slightly more effective in changing opinions than other discussion or role-play activities (D'Eon, 2007; Simonneaux, 2001). Additionally, watching peers on their team argue for the assigned position may have been influential as well. Research has shown that modeled opinions are likely to influence subjects to agree with those opinions when the subject sees him/herself as similar to the modeler (Hilmert, Kulik, & Christenfeld, 2006). Additionally, it has been shown that people are more likely to be swayed to agree

with opinions that they hear from multiple individuals or that are repeated multiple times (Weaver, Garcia, Schwarz, & Miller, 2007). In our class activity, students spent considerable time (three 15-20 minute sessions) discussing their research and debate strategies within their assigned groups. In these discussions, the assigned position was voiced many times by several different students. When the teams presented their arguments during their debates, each student heard the opposing argument from only one student presenter on that team, and the presentation was typically less than one minute. Thus, students had more exposure in terms of time and numbers of students to their assigned position than to the alternate position. It seems possible that the experience of arguing and defending a position during the in-class debate was the factor contributing to their opinion change.

Bell (2004) found that students did not succeed well at defending positions with which they did not personally agree. Yet, based on their written preparation (see Figure 1), students in this debate exercise did just as well whether they had initially expressed agreement with the position or not. Perhaps this success in defending their assigned position influenced their agreement with the position. One possibility to avoid this complication would be the structured controversy debate format. In this type of debate, students not only prepare information for both sides of the debate, but also actively argue both sides (D'Eon, 2007).

This study suggests that debates should be used with care in the classroom, and precautions taken to avoid biasing student positions. Future research is warranted to determine if leaving debate positions unassigned, or using structured controversy debates, produce less bias in opinion shift.

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The Influence of International Service-Learning on Transcultural Self-Efficacy in Baccalaureate Nursing Graduates and their Subsequent Practice

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The purpose of this study was to explain how participation in an international service-learning project during a community health course influenced transcultural self-efficacy of baccalaureate nursing graduates following graduation and their subsequent clinical practice. A qualitative, explanatory case study was used to conduct telephone interviews with 14 nursing graduates, who had previously participated in international trips to Ecuador or Guatemala. A constant comparative analysis revealed themes related to increased self-efficacy in the cognitive, practical, and affective learning dimensions of cultural competence. Additional themes focused on the importance of experiential learning, the provision of culturally congruent care, and a commitment to international service. The findings indicate that service-learning promotes social growth while providing opportunities to increase self-efficacy during cultural encounters with diverse populations. Nursing graduates were able to provide culturally congruent care as a result of their increased transcultural self-efficacy.

Members of The American Academy of Nursing Expert Panel on Global Nursing and Health, The Transcultural Nursing Society, and The American Academy of Nursing Expert Panel on Cultural Competence have established a proposed set of universal standards of practice for culturally competent care (Douglas et al., 2009) for nurses to serve as a guide for clinical practice, research, education, and administration. The challenge for educators is to apply specific pedagogies which demonstrate through research that nursing graduates are prepared to meet these standards of care. Nurse educators are investigating cultural competency outcomes for nursing students through both quantitative and qualitative research methods (Amerson, 2010; Bentley & Ellison, 2007; Jeffreys, 2000; Kardong-Edgren & Campinha-Bacote, 2008; Napholz, 1999; Nokes, Nickitas, Keida, & Neville, 2005; Rew, Becker, Cookston, Khosropour, & Martinez, 2003). Still, a need exists to identify which pedagogies are effective for teaching cultural competence. Not only is this important for nurse educators, but for any discipline which deals with diverse populations.

Service-learning is one pedagogy which supports several of the universal standards for the practice of culturally competent care. Opportunities are provided to address social justice, critical reflection, transcultural nursing knowledge, cross cultural practice, and cross cultural communication through community-based experiential learning. International service-learning is a structured learning experience where students accompanied by faculty travel to different countries and immerse themselves in a culture different than their own (Grusky, 2000). Students work in communities where they are staying, engage in cultural encounters, and experience a new perspective on daily life. According to Campinha-Bacote (2003), cultural encounter "is the process which encourages the healthcare professional to directly engage in face-to-face interactions with clients from culturally diverse backgrounds" (p. 48). Cultural encounters are an essential component of the process of cultural competence, which involves awareness, knowledge, skill, encounters, and desire.

Conceptual Framework

The Cultural Competence and Confidence (CCC) Model attempts to "explain, describe, influence, and/or predict the phenomenon of learning (developing) cultural competence" (Jeffreys, 2006, p. 25). This model supports the major construct of transcultural self-efficacy (TSE), which is the perceived confidence to perform transcultural skills. Cultural competence is a multidimensional learning process that involves three dimensions: cognitive, which focuses on knowledge and comprehension of cultural factors; practical, which involves the application of verbal and non-verbal communication during interviews; and affective, which entails attitudes, beliefs, and values. In this study, the researcher expanded the practical dimension to include communication during patient teaching and communication required for direct nursing care. The affective dimension encompasses self-awareness, awareness of cultural differences, acceptance, appreciation, recognition, and advocacy. The learning dimensions of cultural competence are directly influenced by TSE. As the student's TSE (confidence) level increases in transcultural skills, the student is more likely to engage in culturally congruent care. Culturally congruent care recognizes, values, and adapts to the beliefs and values of diverse client populations. Cultural competence is most effective when all three learning dimensions are actively engaged.

Service-learning is a pedagogy which emphasizes meaningful student learning through active, project-based learning while providing service in the community. Students apply theory and classroom knowledge by addressing community issues while working with members of the community. Assessing new situations and gaining new knowledge to address problems through a wide range of skills allows the student to become an expert learner. A required reflective component encourages personal growth, social growth, intellectual growth, citizenship, and preparation for the world of work (Duckenfield & Swanson, 1992). Service-learning enhances students' engagement with the community, increases civic responsibility, and promotes cross-cultural understanding. Students must be prepared to take part in activities, engage in meaningful community service with adequate supervision, reflect critically on their experiences, and be recognized for their contributions. A lack of preparation for service-learning activities may result in stereotypes and biases being reinforced.

Review of Literature

Nurse educators have conducted research to measure short-term and long-term outcomes of international or immersion experiences with nursing students. One of the earliest studies to evaluate the effect of an international study with nursing students analyzed the impact of a three-month international program on the cognitive development of senior baccalaureate students (Zorn, Ponick, & Peck, 1995). This quasi-experimental study collected quantitative data from eight students who had participated in a semester abroad program and 20 non-participating students. Significant differences were found between the two groups, with the international study group indicating a positive influence on their cognitive development. A grounded theory methodology was used to explore the meaning of an international experience with 14 nursing students, who had taken part in international programs to either the Dominican Republic, Nicaragua, or The Netherlands (Haloburdo & Thompson, 1998). Findings suggest that the length of the trip may be less important than the specific type of experience, since students indicated that trips longer than 2 weeks would not have been possible due to family and job obligations. St Clair and McKenry (1999) conducted a mixed-methods, exploratory study to examine the relationship between cultural immersion, cultural self-efficacy, and cultural competence. The sample included 200 undergraduate and graduate students, and 80 students (50 undergraduate and 30 graduate) who took part in an international experience over a two-year period. Cultural self-efficacy was measured with the Cultural

Self-Efficacy Scale (CSES). A statistically significant increase was noted on the total CSES score for all students. Qualitative data from participant observation and journal entries of students revealed that students who took part in the immersion experience began to challenge their own beliefs and values, increased awareness of themselves and others, began to understand other worldviews, and recognized the effects of prejudice, politics, and poverty.

Other researchers have attempted to directly link service-learning with cultural competence. Bentley and Ellison (2007) utilized a service-learning framework to provide an international experience with senior-level baccalaurate nursing students. The students enrolled in an elective nursing course, which included didactic content and field experience prior to an eight-day trip to Ecuador. The Inventory for Assessing the Process for Cultural Competence Among Healthcare Professionals-Revised 2002 (Campinha-Bacote, 2003) was used to evaluate cultural competence before and after the trip. Results indicated that all students increased their cultural competency scores, although sample size was not reported. An exploratory, descriptive study to identify key experiences of students and faculty following a service-learning experience to Guatemala (Walsh & DeJoseph, 2003) was conducted with 10 students and two faculty. Findings indicate that students and faculty increased their awareness of the global community. Amerson (2010) conducted a quantitative study using the Transcultural Self-Efficacy Tool by Jeffries (2006) and found a statistically significant increase in pre- and post-test self-efficacy strength scores for students who had taken part in a medical misssion to Guatemala.

Researchers have attempted to evaluate the long-term effects of international experiences as well. Students at George Mason University travel to Nicaragua each year. Following six years of the international trips, faculty collected qualitative data from 12 students in order to document the effects of the experience on their personal and professional lives (Kollar & Ailinger, 2002). The researchers report substantive knowledge, preceptual knowledge, personal growth, and interpersonal communication as a result of the experience. A descriptive, qualitative study was conducted with six former baccalaureate students who had taken part in an international trip to Guatemala over spring break (Evanson & Zust, 2006). Most of the themes reported changes in affective learning with increased cultural awareness and advocacy. A modified grounded theory study was completed using focus groups with nine participants (Ryan, Twibell, Brigham, & Bennett, 2000) who had previously taken part in immersion experiences. Outcomes of the experience included changed values, increased communication skills, personal and professional growth. Findings from

these studies suggest that international experiences have a positive effect.

Other health-related disciplines have begun to explore the use of international service-learning as part of their curriculum to increase cultural competence. While medical students are encouraged to engage in international health care experiences, usually in the form of international clinical electives; only limited information is found in the literature related to international service-learning (Pechak & Thompson, 2009). In a phenomenological study with three medical students, Dharamsi et al. (2010) found an increased awareness of marginalization and the social determinants of health following international service-learning experiences. Martinez-Mier, Soto-Rojas, Stelzner, Lorant, Riner, & Yoder (2011) reported how international service-learning was incorporated into a dental school program. A program evaluation was conducted using questionnaires with students and faculty, in conjunction with experiential learning journals. Findings from the study indicated that most students benefitted by recognizing the impact of values and belief systems on healthcare access and making improvements in cross-cultural communication. According to Pechak and Thompson (2009), physical therapist education programs are using international service-learning. Unfortunately, few studies have been published. Pechak and Thompson (2009) did conduct a study to expore the frequency of physical therapist programs which use international service-learning, the differences between programs which choose to use international service-learning and those that do not, and the faculty perceptions of barriers and benefits to the use. Their study did not address student outcomes. Based on a review of the literature, nursing is currently leading other health disciplines in publishing the outcomes of international service-learning.

Clearly, nurse educators are providing research-based evidence that international study is important for increasing cultural awareness and sensitivity for nursing students. While much of the published studies have focused on nursing students, the basic premises can be applied to any service discipline. More research is needed to link specific educational strategies with clinical practice. Studies need to be conducted with specific pedagogies to determine their effectiveness in developing cultural competence. It is important that educators clearly identify the type of experiences that students engage in during international programs. It is apparent from the earlier research that students are gaining affective learning, however practical and cognitive learning appear limited. The process of cultural competence indicates that cultural knowledge and practical skills are important for providing culturally congruent care (Campinha-Bacote, 2003); thus it is critical to evaluate outcomes beyond just raising awareness and increasing sensitivity. Learning outcomes for developing cultural competence need to be translated into improved patient care. Currently, only minimal research exists to explain what influence previous international service-learning has on nursing graduates as they start their careers and begin working with patients. It is this gap in the literature that provides the basis for the following research study.

Description of International Service-Learning Experiences

Over a three-year period, 22 students took part in international service-learning as part of a senior level community health nursing course. Students applied to be part of the international experience. The application process required students to write a short essay explaining why they wanted to take part in the project and what they hoped to benefit from the experience, to have at least an overall 3.0 grade point average, to have two letters of recommendation, and to meet the financial obligations for the travel. Prior knowledge or experience with Spanish was helpful, but not required. Several faculty members reviewed the application materials and selected the eligible students.

Preparation for the international project began early in the semester several months prior to the trip. The faculty member leading the trip met with the selected students each week to orient them to the process of service-learning, teach medical Spanish phrases which would be necessary during the trip, introduce the culture of the host country, and assist/direct the students with collecting epidemiological data pertinent to the country of destination. In 2006 and 2007, students traveled to Guatemala. In 2008, students traveled to Ecuador.

Each year, the faculty member and the selected students traveled with a non-profit, non-denominational, Christian-oriented organization to the host country to provide medical care in rural villages. Although the organization was Christian-oriented, students were not required to be of Christian faith to participate. Devotions and prayer were common activities among the teams, yet students were not required to participate – only to demonstrate respect for the values and beliefs of others that may differ from their own belief systems. For example, if a student chose not to participate in prayer, then the student was expected to maintain a moment of silence while other team members prayed. Nursing as a profession is expected to provide care and demonstrate respect for patients from a wide variety of religious faiths, including faiths that differ from the nurse's own faith.

During each international experience, students worked with a multidisciplinary team of physicians,

nurse practitioners, dentists, nurses, and lay people to provide acute care to the indigenous people in Guatemala or Ecuador. Daily activities included setting up a make-shift clinic in a rural village, assisting physicians and nurse practitioners with medical procedures, preparing and dispensing medications in pharmacy, administering de-worming medications and vitamins, conducting home visits with physicians, conducting triage to direct the flow of care, and providing education on dental care and hygiene. Each clinic day consisted of approximately 12 hours of work with 300-500 people seen for medical services. While interpreters were available, students could not rely on having an interpreter for all communication with each patient. Students needed to have rudimentary Spanish skills to communicate directions for medications and patient teaching. Since students had varying levels of Spanish proficiency, they worked with their peers and other team members to learn the basic phrases they would need to provide care during the clinic day. The daily experiences provided opportunities for the students to recognize common health problems, practice communication in Spanish, observe the environmental issues which impacted health, and witness the impact of severe poverty in lesser-developed countries. The last day of each international experience was spent sightseeing and visiting local markets.

Reflection is an essential component of service-learning. The process of reflection began with the first meetings as students prepared for the experience. The faculty member facilitated discussions about what students would expect to see and experience during the trip. Each student was required to maintain a written journal for reflection with entries before, during, and after the international project. Key informant interviews and in-depth cultural assessments conducted prior to and during the trip allowed the students to work with leaders from the communities and adapt their teaching interventions to the needs of the unique communities. Reflecting on these interviews allowed students to recognize the value of working with the community to identify culturally appropriate interventions. Each day while in-country, the faculty member led discussions with the students to explore their perceptions or the issues encountered during their daily routine. Upon return to the United States, each group of students worked collaboratively to develop a project binder which outlined their international project. This binder included details of their host country, epidemiological statistics, samples of teaching materials, outlines of key informant interviews, benefits and weaknesses of their planned interventions, and pictures from the trip. In addition, students developed a poster presentation, which they presented at a local research forum.

Method

Research Design

This qualitative, explanatory case study sought to explain how participation in an international service-learning project during a community health course influenced transcultural self-efficacy of baccalaureate nursing students following graduation and their subsequent clinical practice as registered nurses. A case-study is "an in-depth exploration of a bounded system based on extensive data collection" (Creswell, 2002, p. 485). Explanatory case studies attempt to explain causal relationships by identifying data which have an influence on the cause-effect relationship (Yin, 1993). In addition, this study may be considered a collective case study sinces it uses multiple cases to provide insight into a group activity (Creswell, 1998). The bounded system for this study involved 22 students who had participated in an international service-learning experience while enrolled in a community health nursing course within the last three years.

Approval for the exempt research study was obtained through the university Institutional Review Board prior to implementation. Telephone interviews were conducted with 14 students. The telephone interviews were semi-structured with several demographic questions and five open-ended questions. Duration of the interviews averaged 20-30 minutes. Interviews should be short, usually about 30 minutes, (Creswell, 1998; Novick, 2008) and consist of five to six open-ended questions (Creswell, 1998). Research (Novick, 2008; Opdenakker, 2006) indicates that telephone interviews are equally as effective as face-to-face interviews.

Semi-structured questions and a telephone script were developed. In order to evaluate the appropriateness of the questions, for both content and time requirements, the sample questions were sent to a nurse educator with extensive transcultural expertise for feedback. Additionally, the questions were piloted with two nursing faculty who had recently taken students to Ecuador and one student who had taken part in a similar trip to Ecuador. All pilot interviews were completed within the allotted 30 minute timeframe.

Sample

Between 2006 and 2008, a total of 22 (21 females and one male) senior-level bacclaureate nursing students participated in a medical mission trip to Guatemala or Ecuador over spring-break week. All students were enrolled in a public university and seeking their first undergraduate degree. No student was greater than 24 years of age at the time of the trips. The investigator used Facebook, an internet social

networking program, to locate 18 of the 22 nursing graduates (Amerson, 2011). One nursing graduate was located through the university alumni association. Five graduates chose not to participate in the study. Three graduates could not be located. All the nursing graduates who participated in the study had been employed or volunteering in a nursing role since graduation. Nursing experience varied from one to three years depending on the year of graduation.

Graduates who were located via Facebook were asked to send their current email addresses to the investigator. Once graduates responded to the investigator through a private email account; the investigator sent the invitation to participate and an information sheet describing the study, risks, benefits of the study, and issues of informed consent. If the graduates were willing to participate, they returned an email to the investigator with a phone number and a convenient time for the interview. All participants used cell phones with unlimited minutes during the interviews, so no cost was incurred for them. One graduate living outside the United States participated in the interviews, but only the investigator incurred costs for the international call.

Data Analysis

Each telephone interview was recorded and converted to a ".wav" audio format for transcription. Each interview was transcribed verbatim and verified with the audio recording to ensure accurary. Field notes were completed starting with the initial data collection and continued through the data analysis phase along with extensive memoing to document the process; thereby creating an audit trail. Constant comparison began with the first interview and continued through the analysis phase. Multiple data sources included public documents (newsletters, newspapers, university-sponsored magazines), which documented the activities and reflections of participants following the international trips. These additional sources were analyzed and compared with transcipts for other potential codes. Initial codes were identified in the transcipts and documents, and eventually moved to a visual grid to facilitate clustering. After codes were clustered, they were collapsed in order to demonstrate evidence of specific themes and subthemes.

Creswell (1998) refers to verification to differentiate between qualitative and quantitative research. Qualitative researchers should engage in at least two verification procedures. This researcher used triangulation between multiple sources of data to corroborate evidence (audio recordings, typed transcripts, field notes, various public documents), clarified researcher bias at the onset of the study in field notes, performed member checks, and sought peer

review with an expert in transcultural nursing. Additional procedures which added rigour to the study involved the use of an audit trail and extensive memoing. Credibility was maintained through verbatim transcripts of interviews. Confirmability was established through member checking.

Results

The qualitative evidence was derived from the use of a constant comparative analysis of the data. According to Hewitt-Taylor (2001), the constant comparative analysis method begins with initial coding from the first case document. With the first reading of the case document or interview, codes were established for words, phrases, or sentences that addressed the research questions. Codes were established for each subsequent case and continuously compared with codes from previous cases. Once all of the study documents were coded, the codes were then clustered according to their similar elements. Clusters of codes were then used to develop the major themes and subthemes. As suggested by Creswell (2002), the major themes and subthemes were identified through a process of eliminating redundancies and codes that could not be categorized. In qualitative research, themes may be developed from the data, rather than literature-based sources, to establish a new understanding of individual perceptions (Hewitt-Taylor, 2001). Once themes were identified, they were categorized based on Jeffreys' CCC Model for learning dimensions of cultural competence. Themes were categorized according to cognitive, practical, or affective.

The following themes and subthemes provide evidence of the outcomes of international service-learning according to the learning dimensions of cultural competence. For readers interested in reviewing the frequency of data and specific codes, a supplemental file is available in the researcher's dissertation (Amerson, 2009). The exemplars are meant only to provide emphasis for each theme; therefore they are not exhaustive of the data collected in this qualitative study.

Cognitive Theme

Cognitive learning gained regarding family function and structure, diet practices, and health beliefs of specific ethnic groups. Family function involves the affection within a family, socialization patterns, and health care beliefs and values. Family structure involves communication patterns, power structure, role structure, and family values (Friedman, Bowden, & Jones, 2003). Graduates discussed recognizing that Hispanic patients expressed pain differently than whites or African American patients.

Ethnic foods played an important role in the care of the patients. Many Hispanic families preferred to bring their food from home to the hospitalized patient. Observing diet practices, while in Guatemala and Ecuador, helped the nursing graduates to understand the value of bringing food from home rather than eating in the cafeteria for many Hispanic families. Many graduates spoke of the Hispanic families being family-oriented with the male in the family as being the leader of the family. Natural herbs are important in the health practices of the families they cared for in their nursing practice. They also recognized the need to incorporate the family into the plan of care. Participants spoke of experiences with communication with the decision-maker in the family. One graduate spoke of a situation where a drowning victim was brought to the intensive care unit:

> We were doing everything we could to keep him alive. . . . "Is this what you want?" She's (mother) like, "No, absolutely not. He's already gone. We need to give him respect and not keep this on." Whereas in the emergency department, if they had just talked to the mother, the right person in the family hierarchy, he wouldn't even have been coded and brought to the unit. They would have just let him go peacefully, naturally, and wouldn't have put them (family) through the trauma . . .

Cognitive knowledge learned during international experiences plays an important role in understanding family dynamics and health care practices when caring for Hispanic patients and their families in the United States (US) healthcare system.

Practical Theme

Practical learning resulted in improved communication skills. Two subthemes emerged from the interviews: Spanish skills and working with interpreters. Improved communication skills focused on learning and improving Spanish skills. Most students who took part in the international trips had taken several high school or college Spanish courses. They indicated that being immersed in the culture where they were required to communicate in Spanish provided confidence that they had not attained during previous Spanish classes. Graduates expressed that working with the indigenous populations of Guatemala and Ecuador allowed them to practice their medical terminology, interview techniques, and patient teaching in Spanish. These previous experiences now allow them to communicate with patients about pain issues, patient teaching topics, and through alternative forms of communication such as touch, a smile, or simple sign language with gestures. One graduate expressed the following:

> I mean I've had Spanish classes before; but by the third day of being in Ecuador all of a sudden I could really communicate with these people using my chopped up Spanish, but I was able to actually communicate with them through the little bit of Spanish I knew . . .

In their current practice, having knowledge of Spanish helped with patients with limited English who were attempting to communicate in English.

> Knowing kind of how they form sentences in Spanish, and understanding that and the pronunciation a little bit has helped me even a little in understanding the English that some of my Hispanic patients have tried to speak to me.

Graduates spoke of the value of learning to work with interpreters. Many graduates currently work in hospitals where they must rely on their own communication skills with non-English-speaking patients until an interpreter arrives on the unit.

Affective Themes

Affective learning resulted in increased awareness, appreciation, and recognition. Three subthemes emerged: (1) awareness (opened my eyes), (2) understanding leads to appreciation, and (3) recognition (privilege).

Awareness (opened my eyes). In eight out of 14 interviews, graduates used the phrase "opened my eyes" or some minor variation of the phrase. They expressed being more open and flexible to accepting people for who they are. Awareness also meant being aware of how people communicate needs differently. Graduates are now aware that each culture expects something (different) from their healthcare. One graduate expressed it in this manner:

> Before going on the trip, you just have the feeling of your way is the right way because you've been doing it for so long, but (now) you're able to understand why other people have the attitude that they do. This made me a more open-minded person.

Another comment expanded on this subtheme of being open.

> I'm just more open to asking them. "Do you prefer me to do it this way or do you want me to do it that way?" You could do everything your way and totally make someone completely uncomfortable or just straight up and ask them what they like and how they prefer to get it done.

Understanding leads to appreciation. Graduates indicated a change in their attitudes and an appreciation for Hispanic culture. One graduate commented, "I get excited when I have a Hispanic family." Many expressed respect and were interested to learn more about the culture. They had begun the process of seeing the patient in a different light. One person expressed it as "to fit their needs versus making them fit your mold." They were more aware of spiritual, cultural, and food preferences. Valuing culture has the potential to lead to a trusting relationship as the following graduate explains:

> . . . culture is kind of like their whole life. And so if you treat them like that doesn't matter and like you don't care about it, and you don't care about learning about it, then why are they going to think you care about them and that you want to help take care of them? Then why should they trust you?

Recognition (privilege). Graduates recognized privilege from new perspectives. They saw the privileges that they experienced as Americans, yet they also saw how the recipients of health care in Guatemala and Ecuador recognized health care itself as a privilege: "It's a totally different perspective on how you view . . . to us, it's a hassle to go to a doctor and to them it's a privilege." Several students spoke of feeling as if they had been living in a box or a bubble in the United States before going to Ecuador or Guatemala.

> Before I went over there, I think I lived in a box, and I didn't realize what else was out there. So it really was an eye-opener for me. And, you know, you come back to America and you're, like, boy, we are so selfish, we are so blessed and we have everything . . . They are so grateful and thankful for what little things we offer them while we were there.

Additional themes emerged which do not neatly fit into the categories of cognitive, practical, or affective.

Seeing makes it real. Graduates repeatedly emphasized the value of "seeing" aspects of a different culture. Seeing the people, the environment, the poverty, the religious practices, the diet, and the lack of health care resources made a huge impact. Prior to each trip, all participants had engaged in lectures, reading assignments, and conversations about the country and regions where they would be traveling. They had heard about the poverty and been prepared for the type of living conditions that they would encounter, but seeing for themselves made it real: "We learn it in textbooks, but to actually see it in practice is different." Another graduate expressed a change in attitude on social issues being faced in the US as a result of going there.

> I think overall in America there is . . . not across the board, but for the most part I would say a lot of people who are frustrated. I think it comes by the influx of the Hispanic population. But I think going there kind of gives you a new perspective and appreciation . . .

Although graduates commonly used the word "seeing," their use of "seeing" did not seem to imply that only observation was important. Interaction with people was an important part of "seeing."

> It was beneficial for me to actually go and physically see and be able to talk to people about their specific beliefs on health care and to be able to see and witness the gender roles and the families and the communities. It was immensely more helpful than just learning in class, to actually be able to go and see that.

Culturally congruent care. Graduates provided numerous examples of providing cultural congruent care in their current nursing practice. They are able to communicate with Hispanic patients in the patient's native language, dependent on the graduate's experience and knowledge of the Spanish language. Overall, graduates feel that their confidence and proficiency with Spanish has improved as a result of the international experience. Graduates are able to recognize different responses to pain with Hispanic patients. They recalled how stoic the people of Guatemala and Ecuador had been in their tolerance of pain. Now, the graduates observe similar stoic responses to pain and encourage Hispanic clients to ask for and accept pain medication after surgery. Patient teaching techniques are adapted based on communication patterns. Graduates recognize that silence does not equate to agreement. During the patient teaching process, Hispanic women may not ask questions and only nod "yes" to instructions. Greater value is placed on the need to follow-up instructions with clarifying questions and to ask for return demonstrations. Interpreters are used to provide in-depth instructions if the patient or family has limited English skills. The three modes of culturally-based action and decision-making (preservation, accommodation, and restructuring) (Leininger & McFarland, 2006) are utilized during practice. Preservation allows natural herbs and teas to be included in the plan of care. Accommodation allows nurses to adapt hospital routines to fit with specific cultural values. Restructuring health care practices through education allows nurses to facilitate changes in family care for better health outcomes. One graduate recalled an experience which demonstrates a changed perspective on the need to provide culturally congruent care.

> Actually, when I first started my job, we have a long list of admission questions, and one of the

things is cultural and spiritual and ethnic requests . . . it was not too long after we'd gotten back from Ecuador. I remember thinking, these people really might have something to fill this place. This isn't just a question just to be nice. These people really might have specific food requests or prayer rituals, or whatever they would like for us to recognize.

Commitment to international service (stepping stone). Overwhelmingly, graduates expressed desire to participate in international service in the future. All participants indicated that they planned to take part in another international medical mission at some point in their life. One graduate explained it in these terms:

It really just served as a stepping stone. I don't think if I had not gone in nursing school, I don't know if I would have gone after college or not. I don't know if I would have made time into my schedule after starting work or not. But now, I make time because I know what an incredible opportunity it is to serve . . .

Of the 14 graduates interviewed, three had already participated in trips to Peru and Honduras since graduation. Two more graduates had applied for trips to be taken in the next year. The remaining graduates commented that work, financial, and family obligations prevented them from taking part in international missions at the present. Several of the graduates had already returned to school to pursue further degrees, but planned to participate in trips following graduation.

Discussion

The findings from this study suggest that service-learning is an effective strategy for teaching cultural competence. Several of the themes and subthemes are consistent with the benefits of service-learning. In addition, the findings from this study are consistent with previous studies on international or immersion experiences with nursing graduates. *Seeing makes it real* is consistent with the experiential nature of service-learning (Nokes et al., 2005). Participants felt that experiential learning in communities was more beneficial than classroom experience (Evanson & Zust, 2006; Haloburdo & Thompson, 1998; St Clair & McKenry, 1999). Experiential learning also involved improved communication skills (Ryan et al., 2000) by learning a second language (Kollar & Ailinger, 2002) and using alternative forms of communication (Haloburdo & Thompson, 1998).

Service-learning promotes social growth (Duckenfield & Swanson, 1992). The affective subthemes of *awareness (opened my eyes)*, *understanding leads to appreciation*, and *recognition*

(privilege) support this increase of social skills. Graduates' awareness of poverty and the lack of resources in these lesser-developed countries were heightened by the international experience (Grusky, 2000; Walsh & DeJoseph, 2003). Witnessing the poverty made graduates feel blessed with so much in the US (Evanson & Zust, 2006). They developed an increased awareness of cultural values and being open to interactions with diverse cultures (Evanson & Zust, 2006; Kollar & Ailinger, 2002) in order to relate to an increasingly global society.

Culturally congruent care is an outcome of international education experiences (Ryan et al., 2000). In order for graduates to provide culturally congruent care, they must be provided with opportunities that promote cognitive, practical, and affective learning dimensions. The findings from this study indicate that graduates did benefit from learning in all three dimensions. Following graduation, they were able to take those learning experiences and apply them to clinical practice to provide culturally congruent care. All graduates indicated they felt a desire to continue with international service during their career. This construct of desire is consistent with the Process of Cultural Competence as developed by Campinha-Bacote (2003).

Cultural encounter is also a construct associated with the Process of Cultural Competence (Campinha-Bacote, 2003). Clearly, the experiential learning during the international experience provided opportunities for cultural encounters. Based on the findings, all three learning dimensions were directly influenced by encounters. Cultural encounters play a major role in moving along the continuum toward cultural competence (Campinha-Bacote, 2003).

Limitations

Having a pre-established framework for the learning dimensions of cultural competence may be viewed by some as a limitation of this qualitative study. The Jeffreys' CCC Model has previously been applied and evaluated based on quantitative measures with the Transcultural Self-Efficacy Tool (Jeffreys, 2000). Qualitative studies may be used to strengthen content validity of a scale (Lo-Biondo-Wood & Haber, 2002). At this time, this study represents one of the first studies to use a qualitative method to assess the learning dimensions of cultural competence. While the researcher did categorize themes based on the learning dimensions of cultural competence, the researcher remained open to potential disconfirming data.

While the literature indicates that telephone interviews are just as effective as face-to-face interviews, the limited time for interviews (20-30 minutes) as suggested by the literature did have an

impact on the ability of the researcher to explore in-depth certain data points which did not emerge in all interviews. Although Creswell (1998) suggests that three to five cases are sufficient for a collective case study, this researcher completed as many interviews as possible in an attempt to confirm information.

Implications for Higher Education

International or immersion experiences for students can benefit from a service-learning framework to organize the learning experience. Students should be prepared with knowledge about the social and political influences of the country, the environment, the native language, and current state of health prior to the trip. While in-country, students should be provided opportunities to work directly with the indigenous people. Exposure to as many variables of daily life as possible will provide the experiential learning to influence the learning dimensions of cultural competence. Classroom or textbook learning will only provide limited knowledge and self-efficacy. Encounters or interactions are crucial to increasing transcultural self-efficacy.

Conclusion

International service-learning provides opportunities for cultural encounters which influence the learning dimensions of cultural competence. These cultural encounters allow practice in applying transcultural knowledge with actual people in a real-life context. Students may learn numerous details about diverse ethnic groups in the classroom, but transcultural self-efficacy will only be truly increased when the student has a chance to practice these skills. Nursing has a long history of using experiential learning and has taken didactic learning from the classroom and applied it to the bedside. Learning strategies for cultural competence are no different. Students must take their knowledge of diverse cultures to the bedside or the community and apply it through direct patient interactions. It is hard to become aware of differences when the person the nurse is caring for looks just like the nurse. For service-learning to be most effective in developing cultural competence, the family or community needs to be different from the student. International service-learning provides a window to a new world with new people, different perspectives, and unique lifestyle practices.

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The Impact of Faculty Teaching Practices on the Development of Students' Critical Thinking Skills

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Colleges and universities recognize that one of the primary goals of higher education is to promote students' ability to think critically. Using data from the Wabash National Study of Liberal Arts Education (WNS), this study examined the relationship between faculty teaching practices and the development of students' critical thinking skills, specifically the differences between students' self-report and the direct assessment (i.e., CAAP) of critical thinking. The results from multinomial logistic regression and OLS regression analyses showed that asking challenging questions increased both students' self-reported and the directly measured critical thinking abilities. Interpreting abstract concepts as well as giving well-organized presentation increased students' self-reported gains in critical thinking; however, these same practices did not significantly impact their CAAP scores. Inconsistent with previous literature, class presentations as well as group discussions decreased either students' self-reported or directly assessed critical thinking abilities. These findings can guide faculty teaching practices to foster critical thinking for first-year college students.

Colleges and universities have long recognized that one of the primary goals of higher education is to promote students' ability to think critically (Astin, 1993; Gellin, 2003; McMillan, 1987). Critical thinking is a widely used term that includes skills in identifying, analyzing, synthesizing, and evaluating information to make informed decisions, and the disposition to apply these skills (Ennis, 1993; Giancarlo & Facione, 2001; Halpern, 1993; Paul, 1993). Although there is considerable debate over the definition and the elements of critical thinking, critical thinking has been listed as a top priority for undergraduate teaching and learning (Astin, 1993; Gellin, 2003; McMillan, 1987). Despite the sustained interests in fostering critical thinking in higher education, there is evidence that college graduates lack critical thinking and problem solving skills needed in today's workplaces (U.S. Department of Education, 2006). This discrepancy may be addressed, in part, by the fact that those teaching critical thinking at the college level do not fully understand how to effectively teach these skills and are unable to transfer critical thinking knowledge into their classrooms (Paul, Elder, & Bartell, 1997).

Literature Review

Instructional Practices Facilitating Critical Thinking Skills

Previous research has demonstrated how particular formal and informal instructional practices facilitate the development of critical thinking skills among undergraduates. These practices include such broad categories as active learning (Astin, 1993; Kuh, Pace, & Vesper, 1997; Pascarella & Terenzini, 1991), teacher clarity and feedback (Cabrera, Colbeck, & Terenzini, 2001; McKeachie, 1990), faculty interactions in and out of the classroom (Pascarella & Terenzini, 1991; Terenzini, Springer, Pascarella, & Nora, 1995), and collaborative learning (Pascarella & Terenzini, 1991; Terenzini et al., 1995). However, research on specific instructor-driven instructional practices that affect students' critical thinking is limited. One of these rare attempts to study the effect of classroom instruction on critical thinking development was conducted by Smith (1977). Using direct measures for assessing critical thinking, Smith found three kinds of instructor-influenced classroom interactions to be consistently and positively related to gains in critical thinking: the extent to which faculty members encouraged, praised, or used student ideas; the amount and cognitive level of student participation in class; and the amount of interaction among students in a course. Following this attempt, Terenzini et al. (1995) also conducted one of the few studies on growth in critical thinking ability that simultaneously examined the effects of instructional methods, particularly student relationships with faculty and instructor effectiveness in different types of courses. However, after controlling for precollege critical thinking ability, none of these variables was significant.

Course assignments and exams are commonly used to foster students' ability to think critically. If instructors can engage students in coursework by using appropriate instructional methods, students will improve their critical thinking skills. In other words, what students do for courses matters more than how instructors teach courses. In his monumental study exploring student involvement in higher education, Astin (1993) found assignments such as giving class presentations and critiquing papers were positively related to students' self-reported growth in critical thinking. Using the data derived from the Cooperative Institutional Research Program (CIRP) 1989 follow-up

survey, Tsui (1999) investigated the effect of instructional techniques on students' self-reported growth in critical thinking. She found that self-assessed growth in critical thinking is positively related to such instructional factors as having a paper critiqued by an instructor, conducting independent research, working on a group project, giving a class presentation, and taking essay exams; negatively related to this outcome was taking multiple-choice exams. Based on these findings, her conclusion was that the characteristics of the instructional methods that are effective for critical thinking development are asking students to construct responses or answers to a question, problem, or challenge rather than merely to memorize, recognize, and select correct answers from among provided possible responses. More recently, Tsui (2002) conducted a qualitative case study of four higher education institutions to explore the contextual factors that could affect students' growth in critical thinking. Through interviews and class observations, she found that the amount of writing and the nature of the writing assignment seemed to matter, such that assignments demanding more analysis and less description were conducive to promoting critical thinking. Furthermore, feedback on one's writing may further facilitate critical thinking, especially if it involves rewriting an assignment. According to Tsui (2002), rewriting challenged students to utilize others' feedback to refine their own, thus requiring an additional step and facilitating critical thinking.

Coupled with rare efforts that empirically examine the effect of particular instructional methods and course assignments on critical thinking, some theoretical and argumentative writings suggest specific teaching methods to foster higher order thinking skills based on authors' teaching experiences. For example, Mills (1998) suggested provocation as a method to foster higher order thinking in classroom environment. Citing his own experience of teaching philosophy using this method as an example, he argues the use of challenging questions and statements can promote students' active participation and learning, which can result in the development of abstract thinking. Owens (2007) argued for the importance of students' self-critique in class for promoting higher order thinking abilities such as thinking critically, analyzing arguments, and reflecting on one's own assumptions. Although Mills and Owen highlight specific teaching strategies to foster critical thinking, past research has rarely attempted to test the effect of provocation or self-critique on the development of critical thinking.

To summarize, several course-related activities or tasks have been identified as significant factors in promoting critical thinking: giving a class presentation, conducting a group project, writing assignment and exams, and conducting independent research, as well as the nature of the task or assignment. In other words, assignments or tasks that require more thinking or analyzing rather than retrieving or describing (i.e., assignments higher on Bloom's Taxonomy of the Cognitive Domain [Anderson, 2001; Bloom, Englehart, Furst, Hill, & Krathwohl, 1956]) are effective for enhancing critical thinking. Despite these recent attempts to unveil the nature of tasks or assignments that are specifically helpful for the development of critical thinking, the studies that examined the effects of instructor-driven teaching practices (e.g., Socratic methods, pushing students to apply concepts learned) are still rare.

Defining and Measuring Critical Thinking Skills

Teaching critical thinking skills to college students is complicated partly due to the disagreement over the definition and components of critical thinking (e.g., see Ennis' [1962] 12 specific "aspects"; Facione's [1990] 5 "dispositions"; Paul, Binker, Jensen, and Kreklau's [1990] 35 "dimensions"; and Clark and Biddle's [1993] 4 "processes"). Authors who have developed the definition and the assessment of critical thinking touched on slightly different aspects of thinking abilities and highlighted one aspect more than the others. For example, Ennis (1962) emphasizes the element of making informed decisions whereas Facione and Facione (1992) highlight the disposition to continuously use critical thinking skills. Recently, authors have tried to define the concept of critical thinking by discriminating it from other similar constructs such as problem solving, reflective evaluation and creative thinking. Problem solving is most frequently confused with critical thinking because both constructs focused on solving the problems at hand via analytical thinking and reasoning. Bailin, Case, Coombs, and Daniels (1999) describe problem solving and decision making as arenas in which critical thinking should take place rather than as other kinds of thinking to be contrasted with critical thinking. In other words, critical thinking encompasses the process of solving problem and making decisions with specific skills and dispositions. Although Marzano et al. (1988) claim that creative thinking and critical thinking are similar and overlapping constructs, Paul (1993) differentiates creative thinking from critical thinking, but highlights that both constructs are not mutually exclusive, and share some skills and abilities. Ennis (1993), however, clearly states that critical thinking does not encompass creative thinking. According to Ennis (1993), creative thinking is generating new ideas or arguments, whereas critical thinking is analyzing or reasoning the pre-existing arguments, and forming informed decisions or views based on this reasoning.

As varied the constructs of critical thinking are, so are the measures for critical thinking. Disagreement in the construct of critical thinking generates several competing measures for critical thinking. To date, the most common measures of critical thinking are skills tests such as the California Critical Thinking Skills Test (Facione, 1990), the Collegiate Assessment of Academic Proficiency (CAAP; ACT, 2000), and Watson-Glaser Critical Thinking Assessment (Watson & Glaser, 1952). Facione and Facione (1992) developed an additional measure for measuring critical thinking dispositions and attitudes called the California Critical Thinking Dispositions Inventory (CCTDI). Although these tests share some common features, they differ in terms of theoretical bases and may measure slightly different constructs. Although some authors argue the advantage and accuracy of using direct measures of critical thinking, others use self-report measures because they are more efficient. Self-report has become a widely used method for gathering information about college students, particularly their attitudes and behaviors. In addition, self-report measures generally allow researchers to gather information from larger samples (Astin, 1993).

Researchers generally agree that self-report measures are valid within certain limits, but caution against using self-report singularly and universally (Gonyea, 2005). These cautions are evident for measures of academic development (Gonyea, 2005; Kuh, 2001; Pike, 1995, 1996). For example, Pike (1995) and Astin (1993) found self-report measures to be an acceptable proxy for academic development when self-report measures and direct assessment measure the same constructs, but self-reports cannot replace direct assessment measures entirely. Previous literature has also reported mixed results of the relationship between students' self-reports and direct measures of critical thinking. Some studies reported moderate correlations (Pascarella & Terenzini, 1991; Tsui, 1999), while Bowman and Seifert (2010) found that small or virtually zero correlations between students' self-reports and direct assessments of critical thinking skills.

Although students' self-reports can indicate cognitive growth, it is possible that students' self-reports and direct assessment measure different aspects of critical thinking abilities and skills. The former might be related to students' satisfaction with collegiate experiences and students' own perception of their developmental levels, whereas the latter might represent an attempted standardized measurement of students' ability levels across disciplines or institutions. This possible discrepancy in the measures of critical thinking, in turn, highlight the necessity of comparing the outcomes derived from different types of measures in order to improve the quality of teaching critical thinking.

The purpose of this study is to investigate the effects of various instructor-driven teaching practices on the development of students' critical thinking ability. While exploring the effectiveness of specific teaching practices, we will also compare students' self-reported measures of critical thinking and direct measures of critical thinking in order to generate practical implications for teaching and learning.

The lack of research on classroom instruction as well as very vague definitions of instructional practices in previous studies brings renewed attention to the topic. In other words, past research has not yet fully addressed the impact of specific instructional methods on students' critical thinking. Furthermore, what has been published cannot answer why particular assignments and tasks are more effective than others. Therefore, this study will contribute to research on critical thinking by specifying various instructor-driven teaching practices and course-related task characteristics to improve critical thinking, which will generate practical implications for professional development. Based on the review of the existing literature and the unknowns it brought to light, this study asks:

- What instructional practices and assignments promoted growth in self-reported critical thinking abilities in first-year college students?
- What instructional practices and assignments predict first-year college students' direct measured gains in critical thinking?
- How do self-report and objective measures of gains in critical thinking compare?

Methods

Data Source

The data for this study were derived from the Wabash National Study of Liberal Arts Education (WNS). King, Kendall Brown, Lindsay, and Van Hecke (2007) synthesized the literature on liberal arts education and developed a model of liberal arts outcomes that embraced seven general dimensions: effective reasoning and problem solving, well-being, inclination to inquire and lifelong learning, intercultural effectiveness, leadership, moral character, and integration of learning. For this specific study, we focused on the outcome of effective reasoning and problem solving which was measured by both students' self-reports of their gains in critical thinking and direct assessment of critical thinking.

The institutions selected for the WNS represent differences in college and universities nationwide on a variety of characteristics including institutional type and control, size, location, and patterns of student

residence. As a result, the sample has a total of 19 four-year and two-year colleges and universities, from which incoming first-year students were selected for participation either randomly (for larger institutions) or entirely (for smaller institutions). The data were collected at the beginning and the end of students' first year, primarily asking their first year experiences at college.

The initial data collection was conducted in the early fall of 2006 with 4,501 students. The data collection included a WNS precollege survey that sought information about student demographic characteristics, high school experiences, educational degree plans, and the like. Students also completed a series of instruments that measured liberal arts outcomes. Effective reasoning and problem solving, which is conceptualized as "the capacity to make reflective judgments; think critically and independently; and analyze, synthesize, and evaluate information in order to make decisions and solve problems" (King et al., 2007, p. 5), was measured through the critical thinking module from the Collegiate Assessment of Academic Proficiency (CAAP).

The Time 2 data collection was conducted in spring 2007, resulting in a participation of 3,081 students with returning rate of 68.5%. For the Time 2 data collection, two types of data were collected; the first was from questionnaire instruments that collected extensive information on students' experience of college. Two complementary instruments were used: the National Survey of Student Engagement (NSSE; Kuh, 2001) and the WNS Student Experiences Survey (WSES). These instruments were designed to capture student engagement in, or exposure to, empirically vetted good practices in undergraduate education. In addition, as a part of NSSE, students were asked to indicate to what extent they perceived that these practices facilitated their learning and development. The second type of data collected consisted of posttest measures of the instruments measuring dimensions of intellectual and personal development using instruments noted above.

For the purpose of present study, we excluded students attending two-year institutions (n = 128) because of the diversity of educational goals for students at two-year institutions. We also selected out cases with missing values either on independent or dependent variables; this resulted in an analytic sample of 1,181 students from 17 institutions. A description of our analytical sample is presented in Appendix A.

Variables

The dependent variables were two measures that assessed students' development in critical thinking: students' self-reported gains in and direct assessment of students' critical thinking abilities. Self-reported gains were measured by asking students the extent to which each teaching practice (e.g., making a class presentation, completing a writing assignment) contributed to the development of students' critical thinking abilities. The critical thinking module from the CAAP was used to assess students' development in critical thinking abilities and skills. The critical thinking test is a 40-minute, 32-item instrument designed to measured students' ability to clarify, analyze, evaluate, and extend arguments (ACT, 2008). The test consisted of four passages in a variety of formats (e.g., case studies, debates, dialogues, experimental results, statistical arguments, editorials). Each passage contained a series of arguments that support a general conclusion and a set of multiple-choice test items. Scores are calculated from these items and scaled using an algorithm devised by ACT to minimize measurement errors. The internal consistency reliabilities for the CAAP critical thinking test are around .85 (ACT, 2008). In addition, Pascarella, Bohr, Nora, & Terenzini (1995) reported that in pilot testing for the National Study of Student Learning with a sample of 30 college students, the critical thinking test of CAAP correlates .75 with the total score of Watson-Glaser Critical Thinking Appraisal, one of the most widely used critical thinking skills assessments.

Students' development in critical thinking abilities was modeled as a function of individual characteristics, institutional characteristics and instructional practices (see Figure 1). Because our major focus was on the impact of instructional practices on students' development in critical thinking abilities, we controlled for individual and institutional variables that potentially confound the results. With regard to individual characteristic variables, we included gender, race/ethnicity, parental educational attainment measured with years of education, parental income, precollege academic ability, and academic motivation. Precollege academic ability was measured with either students' ACT or Time 1 CAAP test scores. These two measures are highly correlated with each other (r = .78), so we used only one of them for our analyses in order to avoid multicollinearity. We used ACT score as a control for estimating self-reported gains, and precollege CAAP scores as a control for modeling the post-test CAAP test scores.

In order to control for institutional characteristics, we included institutional type based on their Carnegie classification, and average class size. With regard to institutional type, regional or research universities were compared to liberal arts colleges. Average class size of each institution was a dummy-coded variable that compared large classes (average class size > 20) to small classes (average class size ≤ 20). The distinction between large and small classes was made based on

Figure 1
Conceptual Model Guiding Effects of Instructional Practices on Critical Thinking
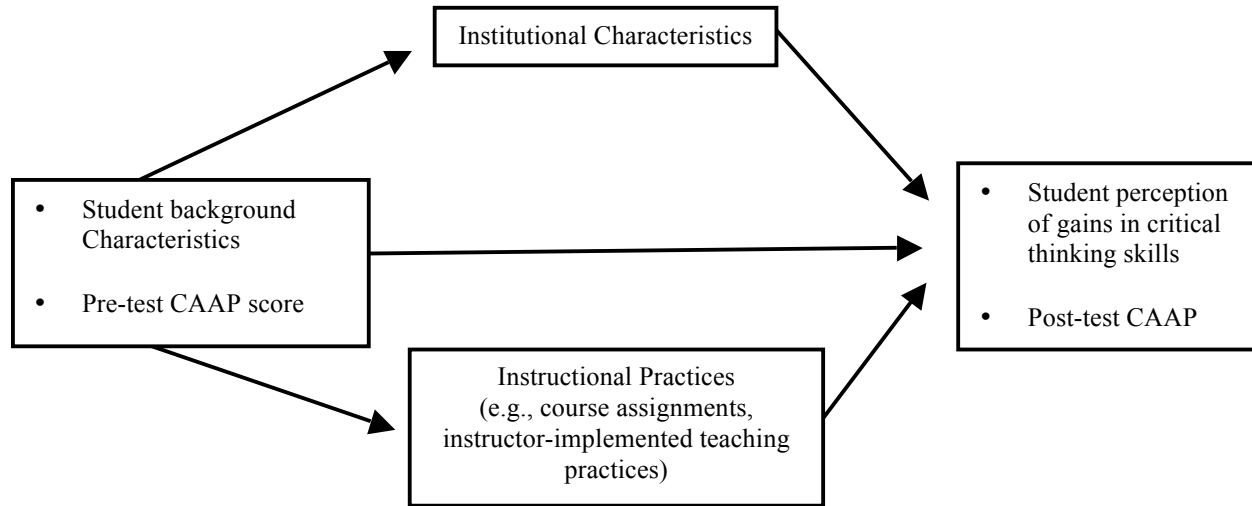
previous literature that defined small classes as classes with less than 20 students (Glass & Smith, 1979).

Finally, instructional practice variables consisted of a set of classroom instruction variables, frequencies of different types of class-related tasks, and the characteristics of these course-related tasks. All of these measures on instructional practices were derived either from the WNS student survey or the NSSE survey to measure students' perception of how often these instructional practices were implemented during their courses. For example, students were asked to respond to a question like, "In your experience at your institution during the current school year, about how often have you received prompt written or oral feedback from faculty on your academic performance (Faculty feedback)" with 4 or 5 point Likert-type scales. A more detailed description of each variable is presented in the Appendix B.

Analytical Models

Students' self-reported gains in critical thinking abilities were analyzed using the multinomial logistic regression (MNLR) technique due to the multinomial nature of the dependent variable. Students' self-reported gains in the WNS were measured with 4-point Likert scale (1: very little to 4: very much). Measures with Likert scales are often conceived of as continuous outcomes, and analyzed with least squares regression technique. However, ordinary least squares (OLS) technique could produce biased estimation because Likert measures are not actually continuous, but ordinal categories. Ordered logistic regression is suggested as a

technique which produces accurate estimation in case of ordinal categorical measures (Peel, Goode, & Moutinho, 1998). However, ordered logistic regression was not appropriate for the present study due to the violation of the parallel regression assumptions (Long, 1997). Consequently, we adopted multinomial logistic regression analysis, and examined differences among students who reported different levels of growth in critical thinking during their first year at college. For the present analysis, two response categories at the lower end were combined into "minimum" gains as Wald Tests for combining alternatives indicated that "very little" and "some" were indistinguishable from each other, $c2(24, N = 1181) = 23.169, p = .510$. Subsequently, "quite a few" and "very much" response categories were renamed respectively as "medium" and "maximum," then the utilities of choosing either of these categories were compared to the utilities of selecting "minimum" response choice. The mathematical representation of the MNLR analytic model was:

$$U_{ji} = \mathbf{X}_{1i}\beta_{1j} + \mathbf{X}_{2i}\beta_{2j} + \mathbf{X}_{3i}\beta_{3j} + e_{ji}$$

where subscript j denoted the choice (e.g., minimum, medium, or maximum) and subscript i denoted the individual case. All the $\mathbf{X}$s on the right-hand side of the equation denoted each set of variables. $\mathbf{X}_1$ indicated a set of individual variables, $\mathbf{X}_2$ denoted a set of institutional characteristics, and $\mathbf{X}_3$ represented instructional practice variables. In addition, although we never observed utility, we inferred from the choices people made how they rank some of these alternatives. Thus, if an individual reported maximum growth in

critical thinking, it must have been the case that the utility of selecting that response category exceeded the utilities of either choosing "minimum" or "medium" response category. In other words, a student chose the response that maximized the utility gained from that choice.

Students' CAAP test scores were analyzed using the ordinary least squares (OLS) regression technique because the CAAP score is a continuous measure. Our OLS model for CAAP scores is mathematically represented as follows:

$$y_{CAAP} = \mathbf{X}_{1i}\beta_1 + \mathbf{X}_{2i}\beta_2 + \mathbf{X}_{3i}\beta_3 + e_i$$

Because the study aims to explore the impacts of instructional practices on students' development while controlling potential confounding variables, as well as to compare different measures on critical thinking, we entered all the independent variables into the regression at the same time and focused more on comparing OLS with MNLR results.

Results

Students' Self-Reported Gains in Critical Thinking

The results of multinomial logistic model (MNLM) on students' self-reported growth in critical thinking are presented in Table 1; this reports the odds ratios that compare the probabilities of either "maximum" or "medium" response categories to those of the "minimum" gains. None of demographic variables (e.g., gender, race/ethnicity) were significantly associated with students' self-reported growth of critical thinking skills. Among other background and institutional variables, students in research universities were approximately twice as likely to report maximum growth rather than minimum growth, compared to students in liberal arts colleges, odds ratio = 2.182. In other words, twice as many students in research universities thought that they gained a lot of critical thinking abilities during their first year than did students at liberal arts colleges.

Among the five faculty-initiated instructional practices, the frequency of faculty asking challenging questions in class had a substantial influence on students' self-reported growth in critical thinking. To illustrate, for a one unit increase in the frequency of faculty asking students challenging questions, the odds of students' self-reporting maximum and medium growth increased by 98.0% and 44.9% respectively, as compared to the odds of students' reporting minimum gains. In other words, the more students were asked challenging questions, the more likely they were to report medium or maximum gains rather than minimum gains. This may imply that students' level of self-report

growth in critical thinking abilities can be increased by the frequent use of challenging questions.

Being in classes with faculty who frequently interpreted abstract concepts for students as well as giving well-organized presentation distinguished the students who reported maximum growth from those reporting minimum growth, but not from those reporting medium growth. Thus, these practices can be said to contribute to only maximizing the students' self-reported growth in critical thinking abilities. To illustrate, the frequency of faculty explaining abstract concepts in class significantly increased the odds of students reporting maximum gains in critical thinking as compared to minimum growth response by 60.2%. We also found that as faculty more frequently gave well-organized presentations of materials in class, the odds of students reporting maximum growth in critical thinking ability increased by 47.7% in comparison to the odds of students choosing the minimum growth response category.

Some variables representing course-related task characteristics had significant impacts on students' perceived growth in critical thinking. Frequent use of course-related tasks that required students to integrate the ideas from multiple sources contributed to an increase in odds of students responding either with the maximum or medium response category compared to the odds of minimum growth. In fact, for a one unit increase in the frequency of this type of task, the odds of students' reporting either medium or maximum growth in critical thinking ability became larger than the odds of minimum growth response by 42.5% and 129.7% respectively.

Only two course-related task characteristics differentiated students reporting maximum growth from those reporting minimum growth. More frequent assignments that required students to compare and contrast topics or ideas from a course increased the odds of students' reporting maximum growth by 45.4%, as compared to the odds of students reporting minimal growth in critical thinking. In addition, for a unit increase in the frequency of faculty feedback on students' assignments or academic performance, the odds of maximum response increased by 71.3% over the odds of students' self-reporting minimum growth in critical thinking. These results indicate that instructors can maximize students' perceived gains in critical thinking by giving more assignments or exams that require students to compare and contrast diverse perspectives as well as by providing more frequent feedback on these assignments.

By contrast, frequency of giving presentations was significant but negatively associated with students' self-reported gains in critical thinking abilities. As the frequency of this assignment increased, the odds of students reporting maximum gains decreased by 35.6%

Table 1
MNLM Results of Students' Self-Reported Growth in Critical Thinking (odds ratios)

Outcome: Self-reported growth in critical thinking	Medium	Maximum
	vs. Minimum	
Controls: Background Characteristics		
Gender (Female)	1.250	1.210
Race/Ethnicity (Non-white)	1.493	1.631
Mother's education	0.993	1.021
Father's education	1.066	1.025
Parental income	1.013	1.006
Academic motivation	0.967	1.062
Precollege academic ability (ACT)	0.988	0.995
Controls: Institutional Variables		
Research university[1]	1.547	**2.182** *
Regional university[1]	0.746	0.643
Large class size (> 15)	0.850	0.625
Variable of Interest: Faculty-Initiated Instructional Practices		
Asking challenging question	**1.449** *	**1.980** ***
Asking students to apply concepts	1.089	1.158
Asking students to defend point of view	1.021	1.115
Interpreting abstract concepts	1.158	**1.602** **
Well-organized presentation	1.034	**1.477** *
Variable of Interest: Course-Related Tasks		
Writing	1.181	1.013
Problem solving	1.108	1.162
Class presentation[2]	0.807	**0.644** *
Group project[2]	0.982	0.852
Variable of Interest: Task Characteristics		
Application of concepts	0.960	1.029
Compare & contrast	1.275	**1.454** **
Defend point of view	0.962	1.235
Integrate ideas[2]	**1.425** *	**2.297** ***
Faculty feedback[2]	1.132	**1.713** ***
Number of Cases	1,181.0	
Log likelihood	-947.37673	
Log likelihood ratio χ^2	374.33 ***	
Pseudo R^2	0.165	

Note. *** $p < .001$; ** $p < .01$; * $p < .05$
[1] Compared to liberal arts university
[2] Items are derived from NSSE survey; all the others are from WNS student survey

compared to the odds of reporting minimum gains. In other words, students who more frequently gave and listened to class presentations tended to perceive less growth in critical thinking. This result contradicted previous studies which highlight the importance of active learning pedagogies, such as giving class presentations and engaging in small group discussions as promoting students' critical thinking skills (e.g., Pascarella & Terenzini, 1991; Tsui, 1999).

Students' Growth in Critical Thinking as Measured by CAAP

Table 2 presents the results of OLS regression on the direct assessment of students' gains in critical thinking skills. Unlike the findings of MNLR, a number

of background and institutional variables significantly affected students' critical thinking ability. Among individual characteristics, academic motivation as well as pre-college critical thinking ability positively affected students' critical thinking ability. Students' pre-college critical thinking ability was the strongest factor predicting their critical thinking ability during their first year. Among institutional variables, there was a significant difference between students enrolled at regional universities and those in liberal arts colleges, with liberal arts college students scoring significantly higher on CAAP test than those enrolled at regional universities.

Of instructor-initiated teaching practices, asking challenging questions in class had a significant and positive impact on students' gains in critical thinking

Table 2
OLS Regression Results of Students' Post-Test Critical Thinking (CAAP)

Outcome: Post-Test Critical Thinking	OLS Results		
	B	β	S.E.
Controls: Background characteristics			
Gender (Female)	0.079	0.038	0.209
Race/Ethnicity (Non-white)	-0.440	-0.188	0.245
Mother's education	-0.018	-0.041	0.053
Father's education	0.016	0.042	0.047
Parental income	0.016	0.031	0.060
Academic motivation	**0.244** *	**0.240**	0.107
Pre-test critical thinking (pre-CAAP scores)	**0.754** ***	**0.794**	0.022
Controls: Institutional variables			
Research university[1]	0.624	0.286	0.356
Regional university[1]	**-0.573** *	**-0.227**	0.269
Large class size (> 15)	0.325	0.161	0.307
Variable of Interest: Instructional practices			
Asking challenging questions	**0.547** ***	**0.433**	0.150
Asking students to apply concepts	0.012	0.012	0.118
Asking students to defend point of view	0.120	0.128	0.118
Interpreting abstract concepts	0.271	0.217	0.145
Well-organized presentation	0.149	0.108	0.154
Variable of Interest: Course-related tasks			
Writing	0.220	0.188	0.132
Problem solving	-0.037	-0.041	0.092
Class presentation[2]	-0.115	-0.075	0.165
Group project[2]	**-0.377** **	**-0.287**	0.134
Variable of Interest: Task characteristics			
Application of concepts	-0.148	-0.156	0.106
Compare & contrast	-0.045	-0.042	0.131
Defend point of view	-0.131	-0.147	0.114
Integrate ideas[2]	-0.294	-0.217	0.150
Faculty Feedback[2]	-0.011	-0.009	0.131
Number of Cases	1,181.0		
$F_{(24, 1156)}$	0.10 ***		
R^2	0.6215		
Adjusted R^2	0.6137		

Note. *** $p < .001$; ** $p < .01$; * $p < .05$
[1] Compared to liberal arts university
[2] Items are derived from NSSE survey; all the others are from WNS student survey.

even after controlling for pre-CAAP scores. In fact, for every unit increase in the frequency of instructors asking challenging questions in class, students' scores on the CAAP increased by .547 points *(b = .547, p ≤ .0005).* In contrast with the MNLR results, other instructional practices were not significantly associated with students' development in critical thinking.

One type of course-related practices did seem to affect students' gains in critical thinking abilities. The frequency of group projects had a significant but negative impact on students' critical thinking skills. As the frequency of engaging in group projects increased, students' post-test scores on CAAP decreased (b = -.377, *p = .005).* This result, similar to the case of MNLR, contradicted previous literature that

indicated a positive impact of group work on critical thinking abilities (Pascarella et al., 1995; Tsui, 1999). None of the assignment characteristic variables were significant for CAAP test scores, which was inconsistent with the results from MNLR analysis.

Discussion

Our results provided several insights into the features of instructional practices that would foster first-year college students' critical thinking abilities. First, instructional techniques that not only provoke students to think differently (e.g., asking challenging questions), but also provide developmental supports (e.g., giving well-organized presentations, interpreting

abstract concepts) are needed to foster students' critical thinking abilities; this balance is consistent with Sanford's (1966) theory that both support and challenge are necessary for growth. Our results indicated that posing challenging questions in class improved students' self-reported as well as objectively measured critical thinking abilities. Teaching practices such as teachers' frequent explanations of abstract concepts to students, as well as well-organized presentations in class contributed to increasing self-report growth in critical thinking among college freshmen. These two teaching practices are slightly different from teachers' asking challenging questions in that the latter stimulates students to think creatively or differently, whereas explaining abstract concepts as well as giving well-organized presentations provides some support. Therefore, instructors should use these practices complementarily by provoking students through questioning that challenges students to view issues from different perspectives, and then providing explanations to help them understand abstract concepts. In other words, the development of critical thinking may require instructors to balance cognitive challenge with intellectual support, as Sanford (1966) suggested.

Second, our results indicated that course assignments requiring students to compare and contrast, and integrate ideas contributed to increasing students' critical thinking abilities. Tasks that require integration of ideas, as well as assignments specifying that students compare and contrast ideas, require students to gather multiple ideas or perspectives, organize them by themes, and highlight the differences and commonalities among different ideas (Barber, 2008). This suggests that the development of critical thinking may entail thinking and analyzing multiple ideas instead of retrieving and recognizing correct answers, which is consistent with what Tsui (2002) found in her study. Consequently, instructors need to focus on the characteristics of tasks (e.g., whether tasks require compare and contrast) rather than types of tasks (e.g., writing, class presentation) and to incorporate analytic components into each class assignment in order to foster students' critical thinking.

Third, our findings demonstrated that student-implemented course practices such as class presentations and group projects did not promote but hindered the development of first-year students' critical thinking abilities. These results are inconsistent with previous studies that indicated the positive effects of these two instructional practices (Astin, 1993; Tsui, 1999). Our findings are likely reflective of first-year students' developmental orientation; that is, first-year students are often externally-defined and rely on authority figures to help them understand the world around them and seek approval from others (Baxter Magolda, 2001). For these externally-defined students, the act of hearing other

students present in class places students in the role of expert and therefore contradicts an externally-defined epistemological belief. They would prefer to learn directly from an instructor rather than from a peer. In a similar vein, externally-defined students in the group situations may be reluctant to challenge each other and share ideas with peers for fear of disrupting the group and potentially receiving negative feedback from others. The positive effect of faculty giving feedback on students' critical thinking abilities may also reflect first-year students' reliance on authority figures for learning critical thinking abilities. In sum, instructors who teach first-year students may benefit from attending to students' developmental orientations and restructuring student-implemented course practices (e.g., class presentation) to meet their developmental capacity.

Finally, we found some discrepancies between students' self-report and direct assessment of critical thinking. For example, frequent use of interpreting abstract concepts had a significant, positive effect on students' self-reported gain; however, this was not a significant predictor for the increase of CAAP scores. One possible explanation for these discrepancies is that the direct measure of gains in critical thinking and student self-reports of gains in critical thinking measure different constructs. For the direct measure, the developers of CAAP defined critical thinking, whereas each student defined critical thinking for self-report measures. Given the breadth of critical thinking definitions within the literature, we expect student interpretations of critical thinking to be just as varied. Although this variation is problematic, the different definitions may also encompass a broader critical thinking skill set than the CAAP. Therefore, the student-identified teaching practices may promote critical thinking skills beyond what the CAAP measures, such as creativity (Marzano et al., 1988) or reflective thinking (Aretz, Bolen, & Devereux, 1997).

In addition to variation in the critical thinking construct, student self-reports might also reflect student satisfaction and student engagement (Bowman & Seifert, 2010). As Astin (1993) reported, when students believed they were learning, they were more satisfied and more engaged with their educational experiences. Increased satisfaction and particularly engagement in learning complemented the pedagogical methods employed by faculty to improve critical thinking skills because students already held faculty and faculty teaching practices in high regard. On the other hand, students who were dissatisfied with their college experience were less likely to report experiences as having a positive impact on their development (Bowman & Seifert,2010). Future research may include measures of student satisfaction in order to better understand the nature of self-report and direct assessments on the development of critical thinking.

Limitations

The WNS dataset has several limitations that should be kept in mind when interpreting the findings. First, although the overall sample includes a broad range of different kinds of postsecondary institutions from 11 different states, the fact that institutions were not selected randomly and that the liberal arts colleges were purposely over-sampled means that one cannot necessarily generalize the results to the population of all four-year institutions in the United States.

A second limitation is the fact that not all students who participated in the first (precollege) data collection participated in the second (follow-up) data collection. The 68.5% persistence rate in the WNS from the first to second data collections is consistent with other large longitudinal studies requiring a substantial amount of participation in terms of time and intellectual effort (e.g., see the National Study of Student Learning, Pascarella, Edison, Nora, Hagedorn, & Terenzini, 1998). However, attrition from the first to second data collections is a major, if perhaps unavoidable, limitation of the study. In other words, we cannot guarantee that those students who dropped out of study after the first data collection would have responded in the same way as their counterparts who persisted in the study from the first to second waves.

Finally, although we cautiously selected instructional methods variables that best captured our conceptual model describing the effects of course practices on students' critical thinking abilities, the use of secondary data sources can limit the investigation of our intended conceptual model. There could be other instructional methods commonly practiced in colleges to promote the ability of critical thinking other than those measured in the first-year of the WNS. Consequently, findings should be regarded as a partial explanation that addresses the effect of instructional practices on students' growth in critical thinking during only their first year at college.

Implications and Conclusion

A number of implications for educational research and practice can be drawn from this study. First, the findings provide practical implications for professional training of future faculty members and graduate teaching assistants. Instructors and teaching assistants need to learn how to organize the class presentations, formulate and ask challenging questions in class, give clear explanations about abstract concepts, and encourage students to apply course concepts for effectively teaching critical thinking abilities. Although these teaching practices could be effective across fields of study, the actual implementation should tailor to the characteristics of each field. For example, probing on

underlying assumptions of an argument would be a challenging question in humanities while encouraging students to integrate multiple theorems for a problem at hand would be challenging in engineering. For this reason, professional training would reflect the context and the characteristics of each disciplinary field.

Second, with regard to course design, instructors should pay more attention to determining why certain assignments or exams are important. This study demonstrates that assignments or exams are only effective in promoting critical thinking because of specific characteristics of those assignments or exams. Thus, when instructors design a course, they need to determine the specifics and the core elements of each assignment. Furthermore, these assignments should incorporate the element of extracting diverse ideas from multiple sources to foster critical thinking.

Lastly, if institutions are truly committed to the development of students' critical thinking abilities, they need to research environmental factors that either facilitate or hinder the development of students' critical thinking skills. From the findings of this study, students' self-reports as well as direct assessments of critical thinking differed across different types of institutions. Students in research universities tended to report maximum growth in critical thinking rather than minimum compared to students in liberal arts colleges. In a similar vein, students in regional universities scored significantly lower on CAAP compared to those in liberal arts colleges. Combined together, these findings suggest that educational practices in research universities or liberal arts colleges work more effectively than in regional universities. These institutional differences may result from different practices implemented in each institution or from differential effects of similar practices on students attending each institution. Whatever the case would be, institutions need to research best practices on campus and examine why these practices work in their context. These best practices, once compiled, could be used for professional development purposes.

This research provides insight into future areas of research. As noted above, the relationships between self-report measures and direct measures may change over time. Future research should include comparisons between self-report and direct measures of gains in critical thinking at the end of college. In addition, comparisons between self-report measures in the first year and direct measures at the end of college might provide insight into whether there is a time lapse between what practices students experienced as enhancing critical thinking in the first year and what practices actually improve CAAP scores at the end of college. In addition, future studies could use multiple items to measure students' self-reported gains in

critical thinking ability in order to improve measurement validity and reliability.

Since self-report results largely depend on student interpretations, qualitative and mixed methods research would provide deeper understanding of the topic. For example, student interviews could explore the basis of student interpretations of the critical thinking construct, as well as gain deeper understanding of the exact faculty teaching practices that students identify as important. Interviews could also assess the types of challenging questions faculty ask, as well why the student believed these questions developed critical thinking skills. In addition, mixed methods research may help explain the contradictory findings about types of assignments by providing insight into how students perceive group work and class presentations.

Overall, these findings highlight the importance of faculty-driven teaching practices in class, such as asking challenging questions or encouraging students to apply course concepts to real-world situations. In addition, by using specified measures that better capture the actual instructional methods used in college classrooms, these findings give a more clear and detailed explanation of the kinds of teaching practices that make a difference in promoting critical thinking. The identification of characteristics of course-related tasks that can increase students' perceived gains in critical thinking is another important finding of the present study. The study found that it is not the type of tasks (e.g., writing reports, class presentation), but rather the task demands (e.g., assignments asking compare and contrast, assignment asking application of concepts) that help students improve their critical thinking. Although instructional practices and certain assignments can promote students' critical thinking, contextual factors such as institutional type may differently shape the effectiveness of these instructional methods. Thus, colleges and universities need to pay more attention to environmental factors that can either facilitate or hinder students' development of critical thinking.

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Appendix A
Sample Characteristics

Variables		Percent	
Gender	Female	63 %	
	Male	37 %	
Race	Non-white	24 %	
	White	76 %	
Class size	Large class ($\geq$ 20)	43 %	
	Small class	57 %	
Institutional type	Research	29 %	
	Regional	19 %	
	Liberal arts	52 %	
Variables		Mean	Standard Deviation
Mother's Education (in years)		15.32	2.25
Father's Education (in years)		15.69	2.64
Family income[1]		5.66	1.90
Precollege academic ability[2]		27.16	4.20
Academic motivation		.00	.98
Pre-test CAAP scores		64.13	5.02
Post-test CAAP scores		64.68 ***[4]	5.37
Self-report gains in critical thinking[3]		2.37	.67

[1] 1 if Less than \$14,999; 2 if ~ \$24,999; 3 if ~ \$34,999; 4 if ~ \$49,999; 5 if ~ \$74,999; 6 if ~ \$99,999; 7~ \$199,999; 8 if ~ \$299,999; 9 if \$300,000 or more

[2] ACT score

[3] 1 = minimal growth, 2 = medium growth, 3 = maximal growth

[4] The difference between pre-test and post-test CAAP scores is statistically significant, $t(1180)=5.2762, p \leq .0005$

Appendix B
Variable Definitions and Coding Schemes

Variable	Description
Outcome	
Self-reported growth in the ability of critical thinking	"Extent to which the institution contributes to the development of students' critical and analytical thinking; "1 minimum, 2 medium, 3 maximum
CAAP	Scores computed and scaled using algorithm devised by ACT
Demographics	
Gender	1 if female, 0 otherwise
Race/ethnicity	1 if white, 0 otherwise
Mother's education / Father's education	11 if did not finish high school; 12 if High school graduate; 13 if Attended college but no degree; 14 if Vocational certificate or 2-year degrees; 16 if Bachelors or other 4-year degree; 18 if Masters; 19 if Law school; 20 if Doctorate
Family income	1 if Less than $14,999; 2 if ~ $24,999; 3 if ~ $34,999; 4 if ~ $49,999; 5 if ~ $74,999; 6 if ~ $99,999; 7~ $199,999; 8 if ~ $299,999; 9 if $300,000 or more
Precollege academic ability	Common high school achievement metric calculated either from SAT or ACT scores
Academic motivation	composite mean of four items measuring academic motivation (e.g., willingness to work hard to learn even if it won't lead to a higher grad)
Institutional Characteristics	
Research university	1 if research university, 0 otherwise
Regional university	1 if regional university, 0 otherwise
Liberal Arts university	reference category
Average class size	1 if larger than 15, 0 otherwise
Instructional practices in class	
Asking challenging questions	5 point scale: 1 = never, to 5 = very often
Asking students to apply	5 point scale: 1 = never, to 5 = very often
Asking students to defend point of view	5 point scale: 1 = never, to 5 = very often
Interpreting abstract concepts	5 point scale: 1 = never, to 5 = very often
Well-organized presentation	5 point scale: 1 = never, to 5 = very often
Assignment Types	
Writing	5 point scale: 1 = never, to 5 = very often
Problem solving	5 point scale: 1 = never, to 5 = very often
Class presentation	4 point scale: 1 = never, to 4 = very often
Group project	4 point scale: 1 = never, to 4 = very often
Assignment Characteristics	
Application	5 point scale: 1 = never, to 5 = very often
Compare & contrast	5 point scale: 1 = never, to 5 = very often
Defend point of view	5 point scale: 1 = never, to 5 = very often
Integration of ideas	4 point scale: 1 = never, to 4 = very often
Faculty Feedback	4 point scale: 1 = never, to 4 = very often

[1] Percent of students who respond with each response category
[2] Number of students who respond with each response category

Emotional Intelligence: A Stable Change?

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In recent decades, emotional intelligence (EI) has emerged as one of the crucial components of emotional adjustment, personal well-being, interpersonal relationships, and overall success in life. Yet few professional curricula adequately address this subject. The results of this study indicate that the potential for enhanced emotional intelligence can be improved in the traditional classroom, employing experiential teaching methods. Further, the findings revealed a significant difference in stability measures between social work and education students, indicating that EI course "Doing Psychotherapy" (conceived by the study's authors) has a differential effect on students of the two faculties. This suggests that EI may not be perceived by all students in the same way; rather, specific goals, the nature of the participants, and the professional setting must be taken into consideration when assessing the impact of EI programs in higher education. Future research should focus on specific EI teaching strategies and on designing evaluation studies that assess changes in knowledge (learning), behavior (expertise), and results (performance).

Emotional intelligence (EI) has been acknowledged over the past twenty-five years as a crucial component of emotional adjustment, personal well-being, interpersonal relationships, and overall success in various contexts of everyday life (Fernandez-Berrocal & Ruiz, 2008). It has shown a positive correlation with such variables as empathy, verbal intelligence, and extroversion, openness to feelings, self-esteem, and life satisfaction (Fernandez-Berrocal & Extremera, 2006; Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke, 2007). In addition, emotional intelligence has been found to be associated with improved outcomes in the areas of employment and academic performance, among others (Boyatzis, 2006).

While the existing EI literature has concentrated on demonstrating the effects of EI on either mental health or job attitudes and performance, there has been relatively little discussion concerning how EI, as a set of interrelated abilities for handling emotions, is developed. Adopting the four-branch model of emotional intelligence developed by Mayer, Salovey, & Caruso (2000), several researchers have argued that emotional intelligence skills can be taught and that individuals can learn and improve their competence in each of the four branches of emotional intelligence (Penrose, Perry, & Ball, 2007). Recently a growing number of scholars have engaged in research designed to examine and apply emotional intelligence constructs to academic and professional-education programs (Abraham, 2006; Hen & Goroshit, 2010; Jaeger, 2003; Low & Nelson, 2005; Walter & Hen, 2009).

Emotional Intelligence

According to the Mayer, Salovey, & Caruso (2000) model, EI refers to the ability to process emotional information as it pertains to the perception, assimilation, expression, regulation, and management of emotion (Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). It comprises a set of mental abilities in which individuals employ higher-level processes in the context of attention to feelings, clarity of feelings, ability to discriminate between feelings, and mood-regulating strategies (Brackett & Mayer, 2003). EI also involves the ability to carry out accurate reasoning concerning emotions and to use emotions and emotional knowledge to enhance thought (Lopes, Salovey, Côté, & Beers, 2005).

Emotionally intelligent individuals are often described as well-adjusted, warm, genuine, persistent, and optimistic (Ivcevic, Brackett, & Mayer, 2007). EI has also been targeted as a good predictor of educational and occupational performance (Hackett & Hortman, 2008; Lopes, Côté, Grewal, Kadis, Gall, & Salovey, 2006). Emotional intelligence brings together the fields of emotions and intelligence by viewing emotions as a useful source of information that helps one make sense of and navigate the social environment (Villanueva & Sánchez, 2007; Weis & Arnesen, 2007).

The four-branch model of emotional intelligence (Mayer et al., 2000) maintains that EI consists of the following interrelated functions: (a) accurately perceiving emotion in the self and others; (b) using emotion to assist thinking and decision-making; (c) understanding emotion in the self and others; and (d) effectively managing emotion in the self and others. These components of emotional information processing are interrelated, so that the more integrated processes (such as understanding emotion) build on the more basic processes (such as perception of emotion). Some research studies indicate that, in addition to constituting separate factors, the functions described in the above model also combine to form an overall adaptive ability, with factors at both levels showing some evidence of validity (Mayer, Salovey, & Caruso, 2004).

Teaching Emotional Intelligence

There is a growing body of evidence suggesting that emotional intelligence cannot simply be enhanced

at the intellectual or analytical level; rather, it involves an extended commitment to changing habits, patterns and hard-wired behaviors (Fernandez-Berrocal & Ruiz, 2008; Low & Nelson, 2005; Walter & Hen, 2009; Weis & Arnesen, 2007). Most reported studies have been conducted in business schools, employing short-term interventions with very small samples. These studies employed a pre-test/post-test research design, and reported significant positive changes in EI, and/or improvement in academic and job performance, dynamic leadership, and workplace success (Abraham, 2006); nonetheless, there is an absence of high-quality empirical evidence regarding the efficacy of the training provided (McEnrue, Groves, & Shen, 2010). Nelis, Quoidbach, Mikolajczak, & Hansenne (2009) developed a short-term intervention that focused on teaching theoretical knowledge about emotions and on training participants to apply specific emotional skills in their everyday life. Sessions were formulated according to Mayer et al.'s (2000) four-branch model, and empirical findings were systematically incorporated into each teaching module. The results showed a significant increase in the identification and management of emotion in the training group. Follow-up measures after six months revealed that these changes were persistent. No significant change was observed in the control group.

Other studies have focused on the education of health professionals, and employed either short-term interventions around communication skills (Fletcher, Leadbetter, Curran, & O'Sullivan, 2009); problem-based training (Wagner, Jester, & Moseley, 2001); or a concise theoretical model (Lust & Moore, 2006). Most of these studies reported a significant increase in EI; however very few EI programs have been based on a solid theoretical model, and even fewer have been rigorously tested. The majority of the studies have been conducted on very small samples using subjective evaluations, and almost none included a control group (Nelis et al., 2009).

Low & Nelson (2005) argue that in order to develop students' emotional skills, EI education models should include practice, experience-based methods, and assessment. Along these lines, they developed and studied an EI training model for teachers and students based on transformative learning. In their model, emotional intelligence is a learned ability to identify, understand, experience, and express human emotions in healthy and productive ways. A salient feature of their approach is the notion that emotional intelligence is best understood and learned when framed around specific emotional skills and competencies, which they have broken down into five steps (*Explore*: Self-Assessment, *Identify*: Self-Awareness, *Understand*: Self-Knowledge, *Learn*: Self-Development, and *Apply*: Self-Improvement). Their findings indicate that students who completed the EI project earned significantly higher GPAs, and showed improvement in other measures of academic achievement; moreover, student retention rates increased.

Weis & Arnesen (2007) experimented with an EI teaching model that integrated both theoretical and experiential teaching modes. They began by defining emotional intelligence and its key components, and described the importance of these skills to academic and professional performance. Participants' EI attributes were also assessed, creating and refining each participant's EI self-critique. Next, they investigated the sources of participants' hard-wired personal patterns, and offered "executive" coaching as both a means to enhance EI and an expression of highly-evolved EI. In their mixed model, they used interactive group exercises; explored effective coaching, communication and listening skills; used structured feedback exercises to raise awareness; and concluded by putting together an action plan based on a heightened awareness of EI challenges evolving from the entire course. Although no objective, quantifiable changes in emotional intelligence were measured, according to the authors this is a very popular course, and their decision to continue offering it is based on the judgment of their mature clientele—graduate students who believe that the program enhances this important skill set Weis & Arnesen, 2007).

Hen & Goroshit (2010) studied a similar model, in social work education, which found a significant increase in EI levels but no improvement in empathy. Walter & Hen (2009) examined the development of EI in education students who participated in a special movement course. They posited that engaging in specific movement routines based on the EI four-branch model would improve students' EI and enhance both their own self-awareness and their skills in teaching young children. Their findings suggested that movement routines that were focused on identifying and understanding the participants' own emotional states, combined with keeping a reflective journal, improved students' self-awareness and ability to self-regulate their emotions. This contributed to a better learning and teaching experience (Walter & Hen, 2009).

Bellizzi (2008) also found that the largely experiential nature of his EI course afforded students the opportunity to learn about themselves in a way that increases the likelihood that the learning has an impact beyond simply "knowing about the experience" (p. 38). Bellizzi (2008) argued that when students record their experience in a personal journal, detailing what they became aware of in themselves and in their interactions with others, it allows them to view their experiences in a reflective manner, and to examine them from the perspective of the various theories and models discussed in the course.

Several other studies have explored the social-emotional competencies of educators' and the importance of improving them, but in a very broad and unsystematic manner (Cohen, 2006; Shoffner, 2009). Most recently, Jennings & Greenberg (2009) proposed enhancing the social/emotional competencies of teachers through stress reduction and mindfulness programs. Sutton (2004) experimented with emotional regulation, and Chan (2004) recommended improving teachers' self-efficacy as a means of increasing their emotional intelligence. Gibbs (2003) claimed that teachers need to develop the capacity to exercise control over their internal world (emotions, thoughts, and beliefs) in order to improve their teaching abilities. Kelchtermans (2005) explored narrative-biographical work with teachers as a means of enhancing their self-understanding and social/emotional competencies, while Shoffner (2009) suggested that reflective practice provides an intellectual means by which to examine the emotional and relational aspects of teaching and learning. Louie, Coverdale, & Roberts (2006) suggested that the teaching of emotional skills requires an environment that values and exemplifies these skills. They argued that psychiatry departments and other organizations that are run in an emotionally intelligent manner are better able to impart emotional skills, since emotional intelligence should be demonstrated from the top down, starting with the department's vision and mission.

Danielsen & Cawley (2007) concluded that the best way to teach compassion, integrity, and other emotional competencies to healthcare professionals is by modeling these values to the students. The inclusion of emotional education in the curriculum is based on the rationale of empowering students to manage situations that may be highly charged emotionally. The underlying premise is that if they are able to deal capably with their own feelings, they will be able to deal with those of others confidently, competently and safely (Roberts, Zeidner, & Matthews, 2001).

In sum, several professional and academic programs have experimented with and studied EI training models; however there is insufficient evidence to support one particular model, and a lack of consensus and guidelines for constructing different models suited to diverse academic and professional programs.

The purpose of this study was to examine the effects of an academic EI course ("Doing Psychotherapy") based on the above principles, which was offered in two different undergraduate programs: social work and education (see the Appendix for the course syllabus). It was hypothesized that students in both programs would increase their level of EI over the duration of the course, though it was unclear prior to the study whether the pattern of this increase would be the same (stable) within each group.

The "Doing Psychotherapy" EI Course

Based on the above literature, the course "Doing Psychotherapy" was designed as an experiential learning environment grounded in constructivist theory. This approach views learning as an active process that constructs meanings in the learners' minds. The learners must be engaged in building their own knowledge and adjusting their cognitive framework to accommodate new information, thereby fostering meaningful learning and deep understanding (Sassi, Monroy, & Testa, 2005).

In keeping with Mayer et al.'s (2000) four-branch EI model, the course focused on experiencing, learning, and reflecting upon the students' emotional processes. Students were encouraged to explore their own self-awareness, their interpersonal awareness, and the steps that could help them translate this knowledge into behavioral changes as well as changes in their belief systems and emotional states. Empathy, understanding of others, acceptance, and validation were also addressed in the experiential components of the course. Based on a strong developmental approach, students were encouraged to examine the impact of their early childhood experiences on their individual development. The course engaged students on several levels: verbal, non-verbal, and the learning modalities of imagery, meditation, and role play. Students were afforded the opportunity to experiment with new ways of thinking, feeling, and acting. In order for them to feel safe in doing so, a group dynamic was created in the classroom that fostered support, validation, acceptance, and community-building. Students also recorded their experience in a personal journal detailing the traits they became aware of in themselves and in their interactions with others. This cognitive activity allowed the students to engage in reflection and to examine their experiences in light of the various theories and models discussed in the course.

Method

Sample and Procedure

The sample included two groups of second-year undergraduate students. The experimental group consisted of 416 students (64% from the education department and 36% from the social work department; 85% females and 15% males; mean age 25.1, SD = 4.1). The students in this group participated in a 14-week semester course entitled "Doing Psychotherapy," and completed a questionnaire at both the first and last sessions of the course. For the social work students, this was a compulsory course given as part of their professional training. For the education students, it was an elective course offered as part of the general B.A.

program in the Education Department. To ensure that the hypothesized increase in EI was due to course participation and not to other factors, we used a control group that did not participate in the course. The control group numbered 190 students (49% from the education department and 51% from the social work department; 85% females and 15% males, mean age 26.2, SD = 6.6). Participation in the study was voluntary and anonymous. There were no significant age or gender differences between the experimental and control groups or between the education and social work students.

Instrument

To measure emotional intelligence, we used the Schutte Self-Report Emotional Intelligence Test (SSEIT), a 33-item self-report test developed by Schutte, Malouff, Thorsteinsson, Bhullar, & Rooke (1998). The test measures four factors: expression of self's emotions, understanding of others' emotions, regulation of emotions, and utilization of emotions. The items are scored on a Likert scale ranging from 1 (does not describe me well) to 5 (describes me very well). The overall reliability of the EI scale in Schutte et al.'s (1998) study was .90.

In the present study, the factorial structure of the SSEIT was supported by confirmatory factor analysis using Varimax rotation. The internal reliability coefficients were sufficient, ranging between .78 and .88. The internal consistency of the overall scale was

.78 for both time points studied (i.e., the beginning and end of the course).

Results

To test whether there was an increase in the overall level of emotional intelligence and its subscales from the beginning to the end of course, we performed a series of paired-sample *t*-tests (see Table 1 and Table 2). The results show a significant increase in the EI mean and its subscales at the conclusion of the course for both the social work and the education students in the experimental group. The comparison of effect sizes (Cohen's d coefficients) suggests that the effect of the course on the social work students was stronger than that on the education students. There was no significant increase in EI in the control group (see Table 3 and Table 4).

To test whether or not the EI change was stable, we ran an autoregressive structural equation model using AMOS 18 (Arbuckle, 2009; Hertzog & Nesselroade, 2003; Jöreskog, 1979). Since we found no significant increase in the EI of the control group, our stability analysis focused on the experimental group only. The basic assumption underlying autoregressive SEMs is that each latent construct measured at time 1 is a function of its former value at time -1 plus stochastic error. The autoregressive process is described by stability coefficients that reflect the amount of change in the relative rank order of individuals between two or more points in time (Finkel, 1995; Jagodzinski, Kühnel, & Schmidt, 1987).

Table 1
Means, Standard Deviations, and Paired Sample t-test Values of EI – Experimental Group, Social Work

Social Work (n=149)	Beginning of Course		End of Course			
	M	SD	M	SD	t	Cohen's d
Expression of self's emotions	15.56	2.23	16.31	1.29	3.51***	.43
Understanding of other's emotions	19.19	2.55	19.80	1.41	3.01***	.31
Regulation of emotions	24.22	3.06	25.07	1.63	3.27***	.36
Utilization of emotions	18.15	2.23	19.26	1.71	5.08***	.56
Overall EI	**77.12**	**9.18**	**80.44**	**4.46**	**4.04*****	**.49**

Note. ***p < .001 (1-tailed)

Table 2
Means, Standard Deviations, and Paired Sample t-test Values of EI – Experimental Group, Education

Education (n=267)	Beginning of Course		End of Course			
	M	SD	M	SD	t	Cohen's d
Expression of self's emotions	15.84	2.36	16.30	1.56	3.95***	.24
Understanding of other's emotions	19.83	2.52	20.21	1.93	2.71***	.17
Regulation of emotions	24.84	2.55	25.27	2.20	3.47***	.18
Utilization of emotions	18.59	2.57	19.28	2.09	5.55***	.30
Overall EI	**79.11**	**7.43**	**81.07**	**6.02**	**5.81*****	**.29**

Note. ***p < .001 (1-tailed)

Table 3
Means, Standard Deviations, and Paired Sample t-test Values of EI – Control Group, Social Work

| Social Work (n = 97) | Beginning of Course | | End of Course | | | |
	M	SD	M	SD	t	Cohen's d
Expression of self's emotions	15.35	2.07	15.67	0.61	-1.517	0.239
Understanding of other's emotions	18.89	2.39	19.18	0.60	-1.235	0.194
Regulation of emotions	23.77	2.58	24.06	0.78	-1.105	0.173
Utilization of emotions	17.80	2.30	17.40	0.51	1.707	0.285
Overall EI	**75.81**	**6.68**	**76.32**	**1.89**	**-.747**	**0.119**

Table 4
Means, Standard Deviations, and Paired Sample t-test Values of EI – Control Group, Education

| Education (n = 93) | Beginning of Course | | End of Course | | | |
	M	SD	M	SD	t	Cohen's d
Expression of self's emotions	15.77	2.23	15.69	1.34	.340	0.045
Understanding of other's emotions	19.07	2.62	19.42	1.63	-1.455	0.165
Regulation of emotions	24.38	2.37	24.12	1.65	1.311	0.129
Utilization of emotions	17.63	2.30	17.67	1.14	-.212	0.023
Overall EI	**76.86**	**6.48**	**76.90**	**4.45**	**-.082**	**0.007**

Figure 1
*A General Model – Standardized Estimates of EI and its Indicators at the Beginning
and at the End of the Course (an overall sample)*
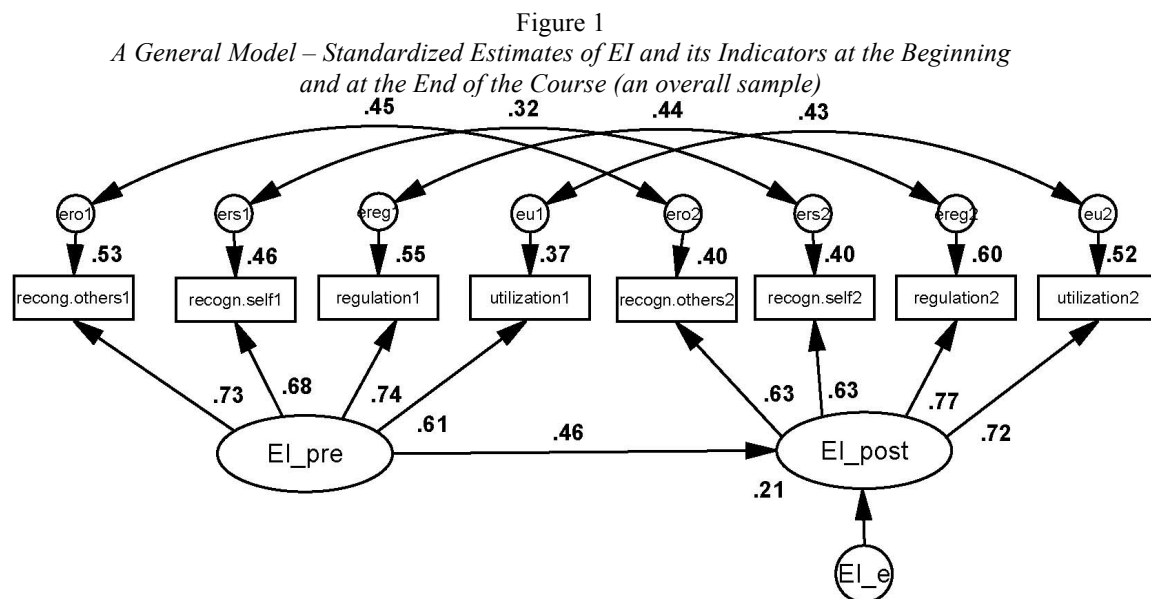
First, we ran a general model for both samples in order to test if there is an overall fit of the model to our data. In this model, we tested the four dimensions of EI, at the beginning and end of the course, as observed variables that loaded on a latent construct—the overall EI (see Figure 1). The fit indices for this model proved to be good (Schermelleh-Engel, Moosbrugger, & Müller, 2008): $\chi^2 = 24.97$, $df = 15$, $p = .05$; $\chi^2/df = 1.66$; NFI (normed fit index) = .982, RFI (relative fit index) = .966, IFI (incremental fit index) = .993, CFI (comparative fit index) = .993, Pclose (p value for testing the null hypothesis that population RMSEA is no greater than .05) = .701, RMSEA (root mean square error of approximation) = .04. In this model, a stability index of .46 revealed that there was moderate stability in EI change for the overall sample.

Second, we divided our sample into two subsamples – social work and education – and ran the same structural equation model for each. The stability index for the education students' sample showed high stability (.76), while for the social work students it showed no stability (.01). In order to test whether the difference between the stability indices of the two groups was significant, we first allowed the path from EI at the beginning of the course to

Figure 2
Scatter Plots for EI at the Beginning and at the End of the Course for Social Work and Education Students
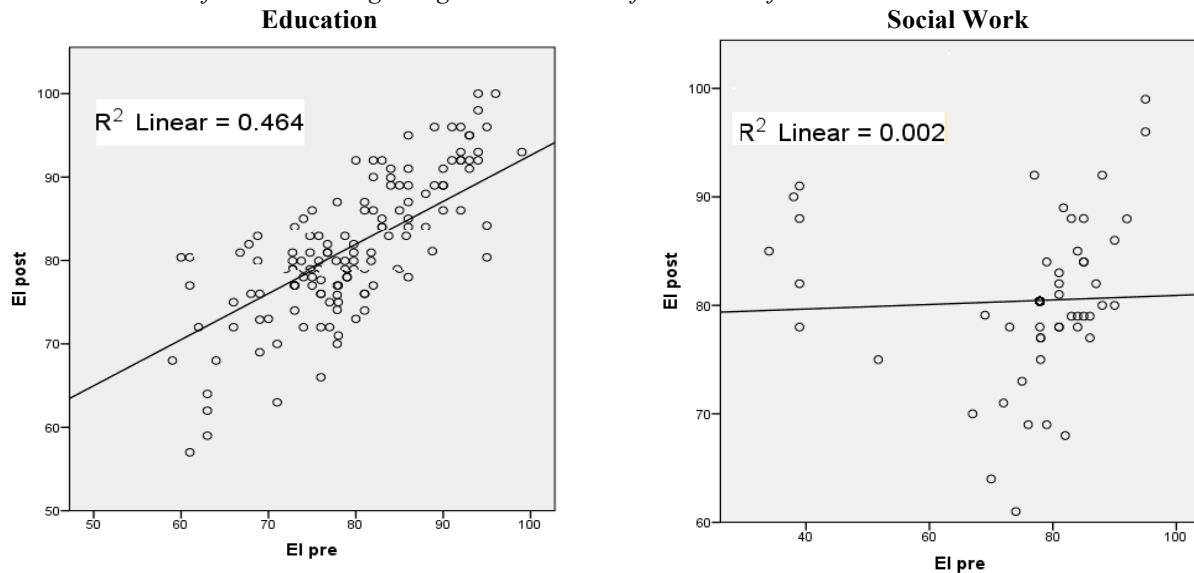
EI at the end of course to be free for both groups. Then we constrained this path to be equal across the groups. Next, we checked the model fits of the two models. Model comparison indicated that the constrained model was significantly weaker than the unconstrained one $\Delta\chi^2 = 66.885$, $\Delta df = 1$, $p = .000$. To demonstrate the stability of the education students' sample, and the instability of the social work students' sample, we plotted the correlations between EI at the beginning and at the end of the course for each of the samples (see Figure 2).

Figure 2 shows that while the relationship between EI at the beginning and at the end of the course for the education students' sample is linear and positive, the relationship for the social work students' sample is curvilinear. As we can see from the figure, there was a group of social work students who began the course with a low level of EI, and ended the course with a dramatically increased level of EI, while a different group within the social work sample showed an EI level that was higher at the beginning of the course than at its end, thereby demonstrating. the instability of EI change among the social work. These results indicate that the "Doing Psychotherapy" course had a differential effect on the education and social work students as well as on the students within each sample group.

Discussion

Educators face the enormous challenge of preparing students to tackle the complex realities they will face in professional practice. Emotional intelligence has been found to be a significant contributor to educational and professional success (Abraham, 2006); however, few academic curricula adequately address this issue and research it in a comprehensive manner (Jaeger, 2003). The purpose of the present study was to contribute to the emerging literature concerning the improving of EI as part of the academic training of mental-health professionals and educators. The primary objective was to examine the effects of an academic course on the EI of social work and education undergraduates. The most significant finding of the study supports our basic hypothesis, showing a significant increase in EI at the end of the course in comparison with the beginning. Both social work and education students showed a significant rise in all EI subscales at the course's conclusion. This finding is consistent with other studies (Clarke, 2010; Fletcher et al., 2009), and suggests that EI can be improved in higher education settings, highlighting the need to explore specific teaching strategies (Boyatzis & Saatcioglu, 2008).

The course examined in the present study utilized an experiential teaching method, based on the argument that teaching emotions and emotional management should be done in a creative, experiential manner (Low & Nelson, 2005; Weis & Arnesen, 2007). While the effect sizes of EI subscale changes for social work students were small to moderate, the effects for education students were insignificant or small. These findings suggest that the effect of the course was more powerful for social work students than for education students. This may be due to the fact that the social work curriculum is part of a well-defined training program. Students participate in a two-year practicum,

are very active in the community, take many courses in intervention techniques, and feel a strong need to reinforce their learning experience by developing their emotional skills. Education students, by contrast, choose this course as part of a general B.A. program (not leading to a B.Ed. or teaching certificate). They enjoy the experiential nature of the course, and the self-exploration, but are not strongly motivated to improve their professional skills. These findings support the results of other studies, which have shown a greater effect of EI interventions in graduate versus undergraduate students (Pau & Croucher, 2003); teachers versus pre-service teachers (Shoffner, 2009); and managers versus management students (Clarke, 2010; Lloyd-Walker & Turner, 2008).

Another possible explanation for the differential impact of the course in the present study is the fact that the education students chose the course as an elective, and were presumably highly motivated to study this topic, as opposed to the social work students, who were obligated to attend it. At the same time, those prospective healthcare providers who had lower EI scores appear to have benefited greatly from the experiential nature of the course, and the warm and supportive atmosphere that characterized the learning process. The type of course described in this study can also contribute to the emerging literature which suggests that strategies for teaching EI should differ depending on the objectives of the EI training, the participating population, and the general theoretical framework (Boyatzis & Saatcioglu, 2008; McEnrue et al., 2010).

Conclusions

Empirical research has produced evidence suggesting that emotional intelligence is important to the performance of health and education professionals; however, very little comprehensive research has been conducted on academic courses centered on EI for prospective healthcare providers and educators. The contribution of the present study lies in demonstrating that an academic course that utilizes experiential teaching modes (reflective journal writing, role playing, and problem solving, inter alia), that maintains a warm and supportive learning atmosphere, and that models self-acceptance and self-awareness, can play a role in developing emotional competencies among undergraduate social work and education students. The study also emphasizes the difference in effect and stability measures between the two faculties, suggesting that an academic course aimed at enhancing emotional intelligence should take into consideration the goals, participants and setting in which it is conducted in order to achieve the best results.

A key limitation of this study is that it evaluated the course's contribution in a quantitative manner rather than assessing the learning process, thereby limiting the information gathered and the applicability to other programs. Although the sample of the present study was of a good size, the internal validity of the findings is somewhat limited due to the fact that other factors such as home, work, socioeconomic status, etc. were not controlled for, and that emotional intelligence was evaluated by one instrument only, meaning that the increased EI scores may not be attributable to participation in the class "Doing Psychotherapy."

Future research should address these limitations, and employ qualitative instruments to learn more about the development of emotional intelligence in mental-health and education professionals. It is hoped that the teaching strategies employed in this course will be the subject of further study to determine how they can be applied specifically in each discipline to yield the best results.

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Appendix
Course Syllabus

Theme	Teaching Strategy	Assignment
What is psychotherapy? Introduction to the process and goals of psycho- therapy	Introduction: Brief 20-minute lecture on the goals of psychotherapy. Reflective: Students are asked to list five things they think and feel about therapy, and to share their answers in small groups.	Reading: Berman, E. (2001). Psychoanalysis and life. *Psychoanalytic Quarterly, 70*, 35-65.
Identifying one's own emotional states	Case study: Students read 4 short vignettes regarding conflict situations, and are asked to express their thoughts and feelings in each situation. They share this information in groups of two, examining the differences in emotional perception.	Prepare a summary of the sharing, to be used in the following class. Reading: Cohen, Y. (2003). Psychotherapy: Art or craft? *Sichot, 17*(3), 283-290 (in Hebrew).
Identifying one's own emotional states	Group work: Students share and analyze the information from last class, this time in groups of 6. They are asked to prepare short presentations on identifying emotions and emotional states (including a search for theoretical information).	Reading: Beresford, P., Croft, S., & Adshead, L. (2008). "We don't see her as a social worker": A service user case study of the importance of the social worker's relationship and humanity. *British Journal of Social Work, 38*(7), 1388-1407.
Identifying one's own emotional states	Presentations	**Empathic listening** - Reading: Omer, H. (1997). Narrative empathy. *Psychotherapy: Theory/Research/Practice/Training, 34*(1), 19-27.
Expression of emotions	Role-playing: Each group receives a short story to act out in class. Students from other classes are invited to join the group and express their thoughts and feelings about the situation in the short story, and about the actors. Discussion about the way people express their feelings.	Students prepare a short summary about how they felt in class and how they expressed these feelings.
Identifying others' emotional states	Reflective: Students are shown a short film about an anorexic teenager. In small groups, they talk about their feeling towards the teenager, her family, teacher, and therapist, and try to identify their emotional states.	Reading: Reupert, A. (2007). Social worker's use of self. *Clinical Social Work Journal, 35*(2), 107-116.

Understanding emotions in oneself (why do I feel the way I do?).	Reflective: Students are shown part of the film again. They are requested to look at the feelings they had in the last class and try to understand why they felt the way they did towards each character in the film, followed by sharing in small groups.	Reading: Lum, W. (2002). The use of self of the therapist. *Contemporary Family Therapy*, *24*(1), 181-197.
Regulation of emotions	Lecture: The relationship between thoughts and feelings.	**Difference between non-verbal sounds and verbal content in the helping encounter** Reading: Landau, M. (1996). Sounds and words in the therapeutic encounter. *Sichot 10*(2), 125-134 (in Hebrew).
Regulation of emotions	Case study: Students read 4 short vignettes regarding conflict situations, and are requested to identify their feelings and thoughts in each situation. Then they are asked to find ways to regulate their feelings by means of their thoughts. This information is shared in small groups and discussed with the entire class.	Reading: Duan, C., & Hill, C. E. (1996). The current stage of empathy research. *Journal of Counseling Psychology, 43*(3), 261-274.
Utilization of emotions	Short film on the fish market in Seattle. Class discussion about how we use our emotions in the relational context and in therapy.	Reading: Neumann, M., Bensing, J., Mercer, S., Ernstmann, N., Ommena, O., & Pfaff, H. (2009). Analyzing the "nature" and "specific effectiveness" of clinical empathy: A theoretical overview and contribution towards a theory-based research agenda. *Patient Education and Counseling, 74*, 339-346.
Utilization of emotions: What does it mean to be empathic?	Lecture: Describe what empathy is and what it is not. Discuss the emotional dimension of empathy and the five emotional competencies that make up this category. In small groups: Relate how empathy is critical to superior performance whenever the job focus is on people.	Reading: Mayer, J. D., Roberts, R. D., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology, 59*, 507-536. Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Models of emotional intelligence. In R. J. Strenberg (Ed.), *Handbook of intelligence* (pp. 396-420). New York, NY: Cambridge University Press.

Theory: Emotional Intelligence	Lecture: Defining emotional intelligence and its key components, according to Mayer, & Salovey (1997).	Reading: Morrison, T., (2007). Emotional intelligence, emotion and social work: Context, characteristics, complications and contribution. *British Journal of Social Work, 37*(2), 245-263.
Theory: Emotional Intelligence and Social Work	Small groups: Work on Morrison's (2007) article, and class discussion.	Reading: Skinner, C., & Spurgeon, P. (2005). Valuing empathy and emotional intelligence in health leadership: A study of empathy, leadership behavior and outcome effectiveness. *Health Services Management Research, 18*, 1-12.
Theory: Emotional Intelligence and Social Work.	Case study: In groups of two, students are asked to analyze a case study, emphasizing their and others' emotional intelligence and trying to apply theory to course experience.	Students are expected to prepare a written reflection on the process they experienced in this course. Reading: Jaeger, A. J. (2003). Job competencies and the curriculum: An inquiry into emotional intelligence in graduate professional education. *Research in Higher Education, 44*, 615-639.
Summary	Class discussion: Can emotional intelligence be taught? How does it apply to social work and to me (the student) as a developing health professional?	Final paper: 1. Reflection: My class experience during this course. 2. Theoretical background: Emotional intelligence and empathy (based on readings). 3. Integration of personal experience with EI theory.

Assessing the Quality of Problems in Problem-Based Learning

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This study evaluated the construct validity and reliability of a newly devised 32-item problem quality rating scale intended to measure the quality of problems in problem-based learning. The rating scale measured the following five characteristics of problems: the extent to which the problem (1) leads to learning objectives, (2) is familiar, (3) interests students, (4) stimulates critical reasoning, and (5) promotes collaborative learning. The rating scale was administered to 517 polytechnic students enrolled in problem-based curricula and the data collected were subjected to confirmatory factor analysis. The results revealed a good fit of the data with the hypothesized five-factor model. The coefficient *H* values of the five factors suggested acceptable factor reliability. Overall, the psychometric characteristics of the rating scale indicated adequacy of the instrument to measure the quality of problems in problem-based learning. Although there are other ways to assess problem quality, the ease of use and means to measure multiple indicators makes the problem quality rating scale useful.

The fundamental elements of problem-based learning (PBL) are problems, students and tutors (Majoor, Schmidt, Snellen-Balendong, Moust, & Stalenhoef-Halling, 1990; Williams, Iglesias, & Barak, 2008). Several studies point out that besides students' prior knowledge and tutors' performance, the quality of problems has the most significant influence on student learning (Gijselaers & Schmidt, 1990; Schmidt & Gijselaers, 1990; Van Berkel & Schmidt; 2000). Despite the significance ascribed to problems in PBL, surprisingly, there is a lack of validated instruments to measure their quality.

Problems are a set of descriptions of situations or phenomena demanding solutions or explanations, and are usually structured in textual format, sometimes with illustrations, pictures, videos, and simulations (Schmidt, 1983). In PBL, problems trigger the learning process. Problems are purported to achieve the objectives of PBL by engaging students in collaborative work and elaboration, thereby rekindling students' prior knowledge and promoting self-directed learning skills, and consequently leading to construction of new knowledge (Barrows & Tamblyn, 1980; Hmelo-Silver, 2004; Norman & Schmidt, 1992).

Generally, there are two approaches to measuring the quality of problems. One approach is to evaluate whether students are able to generate the same learning goals as intended by the curriculum. The degree of congruence between the two is considered to be reflective of problem effectiveness (Dolmans, Gijselaers, Schmidt, & Van der Meer, 1993; Mpofu, Das, Murdoch, & Lanphear, 1997). However, this method has its limitations in the sense that it addresses only one aspect of effective problems – that is, the extent to which a problem leads to formulation of the intended learning objectives. In addition, the procedure of comparing the student-generated learning goals with the faculty-intended learning objectives may be considered as time consuming and tedious. In a study

by Dolmans et al. (1993), 24 expert raters were to compare a total of 51 faculty-intended learning objectives with the learning goals generated by 120 students for 12 problems. Assuming that each student comes up with five learning goals per problem, each rater would have to make 7200 comparisons for 12 problems and 120 students. To reduce the number of comparisons to be made, Dolmans et al. (1993) modified the protocol and allotted one group of 12 students (instead of 120) to each pair of raters. Although, this method provided detailed information about the extent to which a problem leads to the intended learning objectives, the practicality of the method to provide regular feedback about the quality of problems may be limited by the availability of time and resources.

An alternative approach is the administration of a self-report rating scale. To evaluate the quality of a course at the general program level, Schmidt, Dolmans, Gijselaers, and Des Marchais (1995), developed and validated a 58-item rating scale. Of the 58 items, five items measured the overall quality of all problems in the course. Considering that the measurement scope of the instrument was intended to be at the general program level, it may not be adequate in providing detailed feedback about individual problems.

Using Jonassen's theory of problem solving as a basis (Jonassen, 2000), Jacobs, Dolmans, Wolfhagen, and Scherpbier (2003) developed a 12-item rating scale to measure the complexity and structuredness of PBL problems. When the validity of the rating scale was examined by means of confirmatory factor analysis, results suggested an inadequate fit of the data with the hypothesized two-factor model. Instead, an alteration of the model from the two factor structure to a three-factor yielded a better fit. The altered model consisted of the factors: *too simple*, *too difficult*, and *too well-structured*. These factors were derived from the original two factors by splitting *complexity* into too simple or

too difficult, and *structuredness* into too well-structured or too ill-structured, subsequently combining too difficult and ill-structured to form the factor too difficult. Overall, the 12-item rating scale encompassing the three factors was concluded to be an adequate instrument to measure the two characteristics complexity and structuredness. Although the final three-factor model fitted the data reasonably well, it deviates significantly from the initially hypothesized two-factor model and raises concerns about the content validity of the rating scale, since it now measures an extra factor that seems to be conceptually different from what was initially intended.

Marin-Campos, Mendoza-Morals, and Navarro-Hernandez (2004) designed an 18-item rating scale to assess the three aspects of a PBL problem; (1) the extent to which the problem was correctly structured, (2) the extent to which the problem allowed students to carry out the expected learning activities, and (3) the extent to which the allocated time and resources were suitable for the students to work on the problem. Theoretical underpinnings of PBL (Schmidt, 1983; Dolmans, Snellen-Balendong, Wolfhagen, & van der Vleuten, 1997; Rangachari, 1998) served as the basis for the rating scale design. This rating scale was used to gather longitudinal feedback on 14 different problems from a group of 28 students. Compared to the earlier mentioned studies (Schmidt et al., 1995; Jacobs et al., 2003), this rating scale had the capability to yield more detailed feedback on individual problems. In addition, the internal consistency of the three factors seemed to be adequate when examined by means of Cronbach's alpha test. However there are two points to consider. Firstly, despite the reliability and usefulness of this rating scale to provide detailed feedback on individual problems, its validity remains to be tested. As this study involved only 28 students (from a medical course), validation involving a larger sample by means of factor analysis would still be needed. Secondly, the measurement scope of the rating scale could be extended further. For instance, various core learning activities such as identification of key learning objectives, the extent to which the problems encouraged group discussion, and interest triggered by the problem were treated as one factor (the extent to which problem allowed the students to carry out the expected learning activities). Differentiating the various learning activities is likely to provide comprehensive information about the influence of the problem on students' learning.

In summary, the two approaches used currently to assess the quality of problems are; (1) comparison of the student-generated learning goals with those intended by the curriculum, and (2) administration of a self-report rating scale to measure a selected set of problem characteristics. Both approaches have their advantages, but when it comes to practical considerations, administering a rating scale seems more feasible. Considering that the existing instruments only addressed a limited number of characteristics (i.e., two or three), we were motivated to develop and validate a more comprehensive problem quality rating scale.

To this end, we first developed a 56-item rating scale measuring eleven characteristics of effective problems in PBL. These characteristics were based on Sockalingam and Schmidt's (2007) study on students' perspectives of problems in PBL and theoretical underpinnings of PBL (e.g., Dolmans et al., 1997). Pilot testing of the rating scale showed that the data did not adequately fit the hypothesized 11 factor model and guided us in redesigning the rating scale to a shorter form of 32 items. The resulting 32-item rating scale was intended to measure the following five problem characteristics; (1) the extent to which the problem leads to formulation of intended learning objectives, (2) the extent to which the problem is familiar to students, (3) the extent to which the problem interests students, (4) the extent to which the problem promotes collaborative learning, and (5) the extent to which the problem stimulates critical reasoning. The objective of this study, therefore, was to validate and test the reliability of the 32-item rating scale. To this end, the rating scale was administered to 517 first year students at a polytechnic in Singapore. Subsequently, confirmatory factor analysis and reliability measures were carried out to examine the psychometric characteristics of the rating scale.

Method

Participants

The sample consisted of 517 participants (58% female and 42% male) with an average age of 18.69 (SD = 1.70) years. All participants were enrolled in a first year general curriculum in the academic year 2007/2008 at a polytechnic in Singapore.

Educational Context

The sole instructional method used in the polytechnic is PBL. To obtain a diploma certification, students are required to complete approximately 30 modules. To complete their course work requirement, students are encouraged to take four or five modules every semester for three years. Each module consists of 16 problems which are delivered in 16 weeks (one semester). In this approach, students work on one problem per day (Alwis & O'Grady, 2002). The typical class size is 25, in which students work in groups of five. Each class is facilitated by one tutor. The class starts with the presentation of a problem. Students discuss in their teams what they know, do not know,

and what they need to find out. In other words, students activate their prior knowledge, come up with tentative explanations for the problem, and formulate their own learning goals (Barrows, 1980; Hmelo-Silver, 2004; Schmidt, 1993). The tutor oversees the discussion. A period of self-study follows the first meeting. During the study period, students individually and collaboratively try to find information to address the learning goals (Hmelo-Silver, 2004). The class then meets again for a second meeting to discuss their findings and seek guidance from the tutor. This second meeting provides an opportunity to clarify learning goals, misconceptions and learn from each other. The class then breaks again for a second self-study period. This study period allows the students to find out more information and compile their findings. At the end of the day the teams come together as a class to present, elaborate, and synthesize their findings.

Instrument

Problem quality rating scale. We first designed a 56-item rating scale to assess eleven characteristics of effective problems. This rating scale was based on Sockalingam and Schmidt's (2007) study on characteristics of problems in PBL and theoretical underpinnings (e.g., Dolmans et al., 1997). The eleven characteristics are that problems should (1) be of suitable format (such as length of text and use of visuals), (2) be sufficiently clear, (3) lead to the intended learning objectives, (4) be familiar to students, (5) be of appropriate difficulty level, (6) be applicable/relevant (for instance, to other modules/ future work), (7) interest students, (8) promote self-directed learning, (9) stimulate critical reasoning, (10) encourage teamwork, and (11) trigger elaboration. This rating scale was piloted with 185 first year students. Confirmatory factor analysis showed the data did not adequately fit the hypothesized factor model. This is not uncommon in developing a new rating scale/questionnaire (Byrne, 2001). We then analyzed the covariance matrix for items that did not contribute significantly to the underlying factors, or were highly correlated. Items that shared higher correlation with other factors; that is items which cross-loaded were combined to form a single factor, taking the conceptual validity into consideration. For instance, three of the characteristics, (1) suitable format of problem (such as length of text and use of visuals), (2) the extent to which the problem is clear, and (3) the extent to which the problem leads to formulation of intended learning objectives were combined to form a single factor "the extent to which the problem leads to formulation of intended learning objectives." Similarly, two other characteristics; (4) the extent to which problem promotes teamwork, and (5) the extent to which

problem triggers elaboration were combined to form a single factor of "the extent to which the problem promotes collaborative learning." Next, items that did not contribute significantly to the underlying latent factor were dropped. This led to too few items for three of the characteristics. Given that initially these characteristics were only represented by four items, the three characteristics had to be excluded. The excluded characteristics were (6) the extent to which the problem promoted self-directed learning, (7) difficulty level of the problem, and (8) the extent to which the problem is applicable/useful. The remaining three characteristics of effective problems, (9) the extent to which the problem is familiar to students, (10) the extent to which the problem interests students, and (11) the extent to which the problem stimulates critical reasoning, were considered to be unique and were used as individual factors in the rating scale. This resulted in a 32-item rating scale, measuring five characteristics of the problems. The five factors of the rating scale are (1) the extent to which the problem leads to formulation of intended learning objectives, (2) the extent to which the problem is familiar to students, (3) the extent to which the problem interests students, (4) the extent to which the problem promotes collaborative learning, and (5) the extent to which the problem stimulates critical reasoning. For details of the items, see the Appendix. All items were assessed on a 5-point Likert scale: 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree).

Procedure

The rating scale was administered electronically and participants were informed to think about the problem that they had worked on for the day (problem P11) when responding to the rating scale. Participants had fifteen minutes to complete the rating scale.

Analysis

First, the 32 items of the rating scale were parcelled, that is combined in groups of two or three based on semantic overlap (Bandalos & Finney, 2001; Little, Cunningham, Shahar, & Widaman, 2002). A total of 14 parcels were formed. Parcelling is a common measurement practice used in latent variable analysis. A parcel can be defined as the average of the two or three indicator items (Little et al., 2002). A detailed description of each of the 14 parcels, accompanied with the indicator items, is given in the Appendix. Next, descriptive statistics for all items and parcels, and correlation matrix for the five factors were generated. Subsequently, confirmatory factor analysis was carried out using AMOS 5 to examine whether the data fitted the hypothesized five-factor model (Arbuckle, 2003).

The analysis was carried out with three different types of samples: First, with an *exploration sample* ($N = 209$), to conduct an initial analysis of the hypothesized model, and then with a second *construct validation sample* ($N = 208$) to retest the model and cross-validate the second sample with the first. The cross-validation was done by means of a difference in Chi-square test (Byrne, 2001). As such, the models for the two samples were tested with both unconstrained and constrained factor loadings. Significant differences in Chi-square value between the constrained and unconstrained models in relation to the difference in degrees of freedom reveals the extent to which they differ. After the cross-validation was completed, we retested the five-factor model with the third *main sample*, which is the combined sample of the first two. For all three samples, parameter estimates were generated using maximum likelihood and tests of goodness of fit. Chi-square accompanied by degrees of freedom, sample size, *p*-value, root mean square error of approximation (RMSEA), and comparative fitness index (CFI) were used as indices of absolute fit between the models and the data. The Chi-square is a statistical measure to test the closeness of fit between the observed and the predicted covariance matrix. A small Chi-square value, relative to the degrees of freedom, indicates a good fit (Byrne, 2001). A Chi-square/*df* ratio of less than 3.00 is considered to be indicative of a good fit (Byrne, 2001). RMSEA is sensitive to model specification and is minimally influenced by sample size and not overly affected by estimation method (Fan, Thompson, & Wang, 1999). The lower the RMSEA value, the better the fit. A commonly reported cut-off value is .06 (Hu & Bentler, 1999). In addition to these absolute fit indices, the comparative fit index (CFI) was calculated. The CFI value ranges from zero to one and a value greater than .95 is conventionally considered a good model fit (Hu & Bentler, 1999).

Finally, Hancock's coefficient *H* was calculated for each of the five factors using the *main sample*. The coefficient *H* is a construct reliability measure for latent variable systems that represents an adequate alternative to the conventional Cronbach's alpha. According to (Hancock & Mueller, 2001) the usefulness of Cronbach's alpha and related reliability measures is limited to assessing composite scales formed from a construct's indicators, rather than assessing the reliability of the latent construct itself as reflected by its indicators. The coefficient *H* is the squared correlation between a latent construct and the optimum linear composite formed by its indicators. Unlike other reliability measures the coefficient *H* is never less than the best indicator's reliability. In other words, a factor inferred from multiple indicator variables should never be less reliable than the best single indicator alone. Hancock recommended a cut-off value for the coefficient *H* of .70.

Results

Descriptive statistics were calculated for the items and parcels; no outliers or other abnormalities were observed. The correlations between the five factors ranged from .29 and .65 (see Table 1).

As a next step, we tested whether the data fitted the hypothesized five-factor model. We did this for three samples, first, with the exploration sample, followed by the validation sample and finally with the main sample. The model fit statistics for all three samples are summarized in Table 2.

The results demonstrated that the data fitted the five-factor model well. The Chi-square/*df* ratio for the main sample, ($N = 517$), was 2.06, $p < .01$, RMSEA = .05 and CFI = .98. All factor loadings, ranging from .59 to .81, were statistically significant and thus contributed significantly to the respective latent variable. The test for invariant factorial structures revealed that there was no significant difference in the underlying factor structure between the exploration sample and the validation sample (see Table 3).

Finally, the reliability of the factor was determined by calculating Hancock's coefficient H (Hancock & Mueller, 2001). The coefficient H values ranged from .66 (critical reasoning) to .78 (collaborative learning), with an average of .75. The values are indicative of a moderate to good reliability of the rating scale. The mean values, standard deviations, as well as reliability coefficients of the five factors are presented in Table 4.

Discussion

The objective of the present study was to validate and test the reliability of a rating scale to measure the quality of individual problems in PBL. To that end, a 32-item rating scale, based on students' conceptions about five characteristics of effective problems (Sockalingam & Schmidt, 2007) and theoretical underpinnings (e.g., Dolmans, et al., 1997) was developed. The rating scale was tested with 517 first year students in Singapore context. The factor structure of the rating scale was analyzed by means of confirmatory factor analysis using AMOS 5 (Arbuckle, 2003). Results of the confirmatory factor analysis revealed a good fit of the data with the hypothesized five-factor model. The standardized regression weights of all fourteen parcels were statistically significant, suggesting that the parcels contribute significantly to the underlying latent constructs. The coefficient *H* values for the five factors were satisfactory and indicative of a reasonably reliability. Cross-validation of the rating scale using two samples showed that there

Table 1
Correlation Matrix of the Five Factors

Factor	1	2	3	4	5
1. Learning issue	–				
2. Familiarity	.65**	–			
3. Interest	.60**	.56**	–		
4. Collaborative learning	.47**	.29**	.39**	–	
5. Critical reasoning	.49**	.38**	.56**	.51**	–

Note. ** Correlation is significant at the .01 level.

Table 2
Goodness-of-Fit Statistics of the Five-factor Model

Sample	N	X^2	df	X^2/df	CFI	RMSEA
Exploration sample	209	76.34	64	1.19	.99	.03
Construct validation sample	208	130.95	64	2.05	.94	.06
Main Sample	517	131.69	64	2.06	.98	.05

Note. CFI = comparative fit index; RMSEA = Root mean square error of approximation.

Table 3
Cross Validation of Factor Structure

Model description	X^2	Df	X^2_{diff}	df_{diff}	Statistical significance
Hypothesized five-factor model	207.29	128	–	–	–
Model with measurement weights constrained	214.39	137	7.11	9	NS**

Note. **Not significant at the .05 level.

Table 4
Descriptive Statistics and Reliability Coefficient of the Five Factors

Factor	Mean	SD	Coefficient H
1. Learning issue	3.24	.60	.75
2. Familiarity	2.99	.60	.77
3. Interest	3.26	.66	.77
4. Collaborative learning	3.66	.61	.78
5. Critical reasoning	3.70	.51	.66

Note. ** Correlation is significant at the .01 level.

was no significant difference in the factor loadings and hypothesized five-factor model between the two groups. In summary, the psychometric characteristics of the 32-item rating scale seemed to be adequate for measuring students' conceptions about the five characteristics of effective problems.

The five factors of the rating scale are (1) the extent to which the problem leads to formulation of intended learning objectives, (2) the extent to which the problem is familiar to students, (3) the extent to which the problem interests students, (4) the extent to which the problem promotes collaborative learning, and (5) the extent to which the problem stimulates critical reasoning.

The first factor, the extent to which the problem leads to formulation of intended learning objectives, measures whether the problem instruction is clear, whether the keywords and clues that are embedded in the problem text allow students to identify the intended learning objectives, and come up with a logical approach to address the problem. This factor, to some extent, represents Jacob et al.'s (2003) complexity, Marin-Compas et al.'s (2004) two factors on problem structure and problem allowing expected learning

activities, and addresses largely the objective of Dolmans' approach to evaluating the effectiveness of problems by means of comparing student-generated learning goals with intended learning objectives (Dolmans et al., 1993). Of course, the use of self-report measures has its limitations. The indicator items and parcels used in the rating scale may not be as exhaustive as phenomenological approach. However, considering administrative issues, use of a rating scale is far less time-consuming and more practical.

The second factor, the extent to which the problem is familiar to students, refers to students' familiarity with the context and content of the problem. The familiarity with the problem is the result of past experiences, subject-domain knowledge, and general knowledge. Inclusion of this factor in the rating scale seems reasonable considering the large body of research that suggests that prior knowledge strongly influences learning (Anderson, 1990; Dolmans, Wolfhagen, & Schmidt, 1996; Mamede, Schmidt, & Norman, 2006; Norman & Schmidt, 1992; Schmidt & Boshuizen, 1990; Soppe, Schmidt, & Bruysten, 2005).

The third factor, the extent to which the problem interests students, and the fourth factor, the extent to which the problem promotes collaborative learning, represent the same two factors as in Schmidt's general model of PBL (Schmidt & Gijselaers, 1990). In our case, however, we are more concerned about measuring the student interest and collaborative learning at the problem level to provide detailed feedback on individual problems. As such, the grain-size of our instrument is larger in order to detect differences between individual problems. Interest generated by the problem refers to the level of curiosity and engagement invoked by the problem. Collaborative learning promoted by the problem refers to the extent to which the problem triggers teamwork and elaborations such as brainstorming and discussions. This is also referred to as group functioning in PBL literature.

The fifth and final factor, the extent to which the problem stimulates critical reasoning, refers to the extent to which the problem triggers questioning, stimulates thinking and reasoning, as well as whether the problem allows for multiple solutions. The latter was referred to as structuredness by Jacobs et al. (2003). In our case, however, the fifth factor is broader, and includes questioning, thinking, and reasoning in the context of PBL problems (Kamin, O'Sullivan, Younger, & Deterding, 2001; Tiwari, Lai, So, & Yuen, 2006).

In conclusion, the five factors described above extend the measurement scope of the existing instruments. Besides the characteristics measured by the existing instruments (Jacobs et al., 2003; Marin-Campos et al., 2004; Schmidt et al., 1995), the problem quality rating scale discussed in this study includes four additional factors (The extent to which the problem is familiar to students, the extent to which the problem interests students, the extent to which the problem promotes collaborative learning, and the extent to which the problem stimulates critical reasoning). This study, therefore, may provide an instrument to measure the quality of problems in a more comprehensive manner than those available at present.

One important point to note in this study is that the administration of rating scale was post-experience; the problem quality rating scale was administered to the students after they had worked on the problem. In this case, students had retrospectively assessed the problem. Whether the rating scale could be used to predict the quality of problem remains to be tested. Given that there is communication between the students and the tutors and within the groups of students during the learning process on the content as well as the learning process (Hmelo-Silver, 2004), it is likely that the students' perceptions of the problem quality is molded by the students' learning experience with the problem. For instance, in PBL, the tutor would from time to time check on the students' progress and would feedback on the students' learning such as relevance of learning objectives, critical reasoning and collaboration as a team. The tutor would also summarize the learning objectives at the end of the lesson, which would allow students to compare their work with the faculty-intended learning objectives (Hmelo-Silver, 2004). However such indicators of student learning would be missing if students had not experienced the problem. Therefore, we feel that it would be more meaningful to collect feedback on the individual problems after students had worked on the problem (rather than before). Often, courses are evaluated at the module level (Schmidt, et. al., 1995) and this would not provide much information on which set of problems had not been effective. The problem quality rating scale would allow us to systematically collate data on various problem characteristics at an individual problem level and allow us to review the module at an individual problem-level. To further test the usability of the problem quality rating scale, future studies could look into administering the rating scale for a number of different problems from different subject domains and correlating students' assessment of the problem with their academic achievement.

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Appendix
Detailed Description of the Five-Factors and 14 Parcels

Parcels	Statement
Factor 1: The extent to which the problem leads to formulation of intended learning objectives	
1. Clarity of the problem	1. I was clear about what the problem required my team and me to do
	2. The problem was clearly stated
2. Elements of clue or key words in problem	3. The problem provided sufficient clues/ hints
	4. The problem contained sufficient keywords
3. Structured approach to the problem	5. I was able to identify the key learning objectives from the problem
	6. I was able to come up with a satisfactory list of topics to explore on based on the problem
	7. I had a logical approach to the problem
Factor 2: The extent to which the problem is familiar to students	
1. Familiarity with content	1. I was familiar with the content of the problem even as I started to work on it
	2. I have personally experienced one or more situations described in the problem
	3. I could relate to the content of the problem based on my experiences
2. Relates to general knowledge	4. The problem statement fits well with my prior knowledge
	5. The subject matter of the problem reflected current affairs/issues around the world
3. Relates to subject-domain knowledge	6. I have done similar topic as in the problem before
	7. I had sufficient basic knowledge to identify suitable resources
Factor 3: The extent to which the problem interests students	
1. Triggers personal interest at the start	1. I was not interested to read the problem
	2. I was curious to find the answer
2. Engages in self-directed learning	3. The problem stimulated me to find out more information on the topic
	4. The problem stimulated me to work hard during the breakouts
3. Problem captivates attention	5. The problem was engaging throughout the learning process
	6. The problem captivated my attention throughout the day
Factor 4: The extent to which the problem promotes collaborative learning	
1. Problem triggers brainstorming	1. The problem triggered sufficient level of group discussion
	2. We brainstormed over the problem on what we needed to find out
2. Problem triggers team discussion	3. Everyone in the team participated in the discussion
	4. The problem stimulated us to discuss
3. Problem encourages team work	5. Team member's expertise in different subjects helped in solving the problem
	6. Our team worked efficiently
Factor 5: The extent to which the problem stimulates critical reasoning	
1. Problem stimulates thinking, questioning and reasoning	1. The problem triggered lots of questions in my mind
	2. I analyzed the information collected to respond to the problem
	3. The problem stimulated me to think and reason statement
2. Problem encourages multiple perspectives	4. The problem had more than one right answer
	5. There were many different viewpoints regarding the solution
	6. Team members had diverse opinions on the problem

Online Graduate Education: Developing Scholars through Asynchronous Discussion

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Considerable effort has been placed on understanding and enhancing online interaction to increase student learning, examine teaching strategies, and build learning communities. This research explored another aspect of interaction: the emergence of scholarship by graduate students through asynchronous discussion. Qualitative analysis of archived discussion postings found that graduate students rely on their experience, expertise, and each other. Three major aspects of scholarship emerged: (1) recognizing task difficulty; (2) posing difficult questions; and (3) applying information to other fields. Overall, graduate students welcomed the opportunity to express their knowledge and competencies, showing signs of learning and scholarship.

People associated with postsecondary institutions would agree that technological advancements, particularly the computer, have created tremendous opportunities for education. As LaPidus (2001) indicated, the computer profoundly affected the way work gets done in postsecondary institutions. He concluded, however, that the computer had little effect on how people interacted with each other. The Internet helped solve that problem. With it considerable effort has been placed on understanding and enhancing interaction to increase student learning, examine teaching strategies, and build learning communities (e.g., Bender, 2003; Ko & Rossen, 2004; & Palloff & Pratt, 1999). Additionally, the Internet is seen as the primary means to deliver "the master's degree and postbaccalaureate certificate programs" (LaPidus, 2001, p. 257). In doing so, developing online communities have become a major focus of study (e.g., Allen, 2005; Hopkins, Thomas, Meredyth, & Ewing, 2004; Hudson, Hudson, & Steel, 2006; Joe & Lin, 2008; Sorensen, Takle, & Moser, 2006; Wisker, Robinson, & Shacham, 2007).

As important as online communities are to learning (Liu, Magjuka, Bonk, & Lee, 2007), graduate education represents the process of students becoming scholars (Gardner, 2008). Students need to be engaged in educational processes, enabling them to reflect a greater sense of scholarship, which is viewed as "creative work carried on in a variety of places, [where] its integrity [is] measured by the ability to think, communicate, and learn" (Boyer, 1990, p. 15). Boyer's concept serves as a general theoretical framework for the study. In recent years scholarship has come to mean much more than that. For example, it has developed into a product expressed as artifacts, such as presentations and publications (e.g., Major & Palmer, 2006; Nicholls, 2004; Trigwell & Shale, 2004). Fundamentally though, scholarship is a process whereby people interact with the intellectual community. The quality of this interaction helps develop future scholars who seek advanced studies in graduate schools (Wulff & Austin, 2004).

Purpose of the Study

When approaching this topic, there are five major issues that give rise for this type of study. First, current research is deficient in demonstrating a connection between the online environment and quality of graduate learning as a whole. Second, it specifically lacks information about graduate students developing as scholars through online education. Third, empirical references are insufficient to demonstrate how asynchronous discussions might lead to scholarship. Fourth, much of the literature reports online undergraduate knowledge and skill development, but it does not discuss graduate education. Fifth, graduate work is often the process of becoming a scholar (Gardner, 2008), but the literature on scholarship is void with regard to the online environment. Thus, this research serves, in large part, as exploratory inquiry.

The graduate experience is to be a transition to an independent scholar (Gardner, 2008). As more and more students seek their graduate studies online, institutions are faced with challenges to produce skilled scholars. Unfortunately, the research is lacking in the area of graduate online learning as it engages students' development as scholars. How this might be accomplished is the premise for this study. It explored how an online environment engaged students toward becoming scholars. Particularly, the study focused on their interaction during asynchronous discussions.

Literature

Since 1990 when Ernest Boyer challenged the academy to rethink its traditional roles of teaching, research, and service, academics have generated a tremendous amount of speculation, interpretation, and application about his ideas of scholarship. One of the

better recognized definitions of scholarship has been developed by Glassick, Huber, and Maeroff (1997). They assert that scholarship is demonstrated according to six criteria: (a) clearly stated goals, (b) knowledge of literature and skills, (c) effective application of methods, (d) added knowledge to the field, (e) clear results with integrity, and (f) value of the work as critically reflected upon. However, what is the expectation among emerging scholars? Posed another way, how do graduate students reflect scholarship in their academic work?

Scholarship

One might expect that for graduate students to reflect scholarship, faculty would need to reshape their teaching. Major and Palmer (2006) found that pedagogical strategies are often based on one's subject matter. More specifically, faculty teach according to the way they were taught. This suggests, then, that if an academic's approach to teaching does not reflect elements of scholarship, it may be difficult for students also to reflect scholarship, as they would have no distinct model to emulate.

Emulation should be no less true of faculty working with graduate students as emerging scholars. Sharma and McShane (2008) echoed this sentiment as student learning is improved in authentic settings. Therefore, for students to emerge as scholars they should be in authentic scholarship settings. This might be better suited for on-ground programs, particularly if graduate centers are available (Brandes, 2006). It may be less easily accomplished in online programs where most interaction among students and faculty tends to be through asynchronous venues. However, the literature surrounding asynchronous discussions does not focus on the activity as scholarship, but primarily on the development of critical thinking skills.

Critical and Higher Order Thinking

Much of the literature pertaining to asynchronous online discussion suggests its purpose is to develop critical thinking skills. Havard, Du, and Olinzock (2005) stated asynchronous discussion can result in critical thinking and may lead to deep learning. This method allows students time for reflection before responding in contrast to face-to-face methods. How much more critical and higher order thinking is produced is debatable, though various studies indicated results of an increase in critical thinking ranging from 16% to 26% (Garrison, Anderson, & Archer, 2001; Gilbert & Dabbagh, 2005; Meyer, 2003; Schrire, 2006).

More recently, Bradley, Thom, Hayes, and Hay (2008) looked at how question type affected quality and quantity of posts. Bradley et al. (2008) looked at higher order thinking defined by Bloom's taxonomy as analysis, synthesis, and evaluation based on Gilbert and Dabbah's (2005) coding scheme. The research indicated that even though asynchronous online discussions can measure pedagogical strategies, critical and higher order thinking are the major outcomes. However, this suggests that asynchronous online discussions are self limiting, and thus, restrict the range of purposes for which discussions can be used. The results of this research indicate other outcomes can be achieved from asynchronous discussion for the development of scholars.

Graduate Education and Online Learning

According to Geiger (2007), graduate education predominately is tied to research but assumes a larger role in society. In the online market approximately 85% of master's degrees are practice-oriented, and only 15% are in the traditional arts and sciences (LaPidus, 2001). Furthermore, graduate-service universities routinely provide specialized knowledge in various fields and help meet the need for student advancement in professional fields and occupational mobility. As Geiger further noted, providing this type of graduate education is in keeping with the traditions of American higher education as it learns from its environment and makes itself useful.

Being useful is one thing, and being effective is quite another. Singh and Pan (2004) stated there is debate about the effectiveness of online education, particularly with rapid growth. The number of institutions offering online education has increased over 800% from 1993 to 1997 (93 to 762) (Hankin, 1999). Singh and Pan concluded that for online courses to be effective the importance of participation must be emphasized. Since students do not meet face-to-face because of place and time constraints (Charalambos, Michalinos, & Chamberlain, 2004), information quality significantly influences a student's satisfaction and intention to participate (Lin & Lee, 2006). Consistent with on-campus delivery systems, graduate education must impart a deep awareness of participation, even scholarship. But how? More specifically, how can online delivery of graduate courses create an environment of scholarship?

Description of the Setting

This study began serendipitously. A faculty member, an assistant dean of curriculum, and an assistant dean of faculty were designing an online graduate level course in higher education governance. At the risk of overwhelming students with too many regular discussion assignments, a decision was made to alter a discussion format. The assistant dean of faculty

suggested a different type of student interaction—the Muddiest Point (Angelo & Cross, 1993). Once the course was designed and integrated into the curriculum, each faculty member teaching it could not change activities or assignments.

The Muddiest Point is a classroom assessment technique in which faculty solicit feedback from students about points they find confusing or difficult. Since the format could not be applied directly online as it could on-ground, the activity was modified to accommodate the online environment. The online version was based on the concept of Knowles' (1980) assumptions of andragogy, in particular, that adults bring a wealth of experience to learning, and they focus on problem solving more than subject matter.

The role of a faculty member for the modified version was to be a monitor for interaction. Monitoring simply involved checking to make sure students dealt with the subject matter among themselves and acted professionally. Students were provided detailed guidelines, but in essence, the faculty member stipulated that students were to use the discussion to assist each other with written assignments. The Muddiest Point corresponded to written assignments with the first of five assignments being less difficult in order to allow students to adjust to the format. Ultimately, the discussion was a platform for students to clarify written assignments where they compared faculty senate models with administrative models to establish shared governance characteristics at colleges and universities.

After the initial course was taught, it appeared that the function of the discussion had exceeded its intent. The original intent was to provide students with a collegial platform for helping each other with difficulties arising from an assignment. However, students interacted in a complex fashion rather than just completing an activity. It was this observation that led to this study to understand how graduate students might develop as scholars in an online environment.

Method

The online format is an increasingly popular method to deliver postsecondary education. Studies of online education are increasing in popularity as well (Haigh, 2007). This study investigated the emergence of scholarship by graduate students through asynchronous discussions in an online environment. In order to address this issue more fully, a case study approach was undertaken. It examined the phenomenon as a bounded system (Merriam, 2002). Bounded refers to a single entity or unit by which a phenomenon is limited. In this instance it is an online graduate course, and more specifically, students' use of a Muddiest Point discussion in that course. The course and participants

were selected for two reasons. First, the Muddiest Point activity appeared to produce learning beyond its original intent. Second, graduate students are expected to exhibit scholarship characteristics and these appeared to be emerging. To address ethical concerns with the inquiry and participants, the study was approved through the university's Institutional Review Board.

Data Collection

Data collection involved examining the case from multiple perspectives. First, the course was offered in a ten week format. The Muddiest Point discussions required participation by students during five consecutive weeks of a ten week course. Even though each week offered a new written assignment, the standards of the Muddiest Point interaction remained the same. Second, the course was taught an additional four more times from its initial offering by four separate faculty members, of which the researcher was one. The courses were not offered at the same time but staggered over a six month period. Faculty members did not discuss with each other their experiences. Third, the students took the course as a requirement. There were a total of 39 graduate students in the four courses: 12, 11, 8, and 8 respectively. Fourth, the actual discussions were highlighted, copied, and pasted into a Word document. This process preserved the flow of the discussion as well as the content, date, time, and number of each participant's posts. This resulted in 392 pages of transcripts. Each course contributed a relatively equal number of pages of asynchronous interaction. Table 1 provides an overview of the contributions.

Coding. Each course was assigned an alpha value, and within each course every participant was given a numeric value. By assigning alpha-numeric designations demographic biases were mitigated. Student contributions were color coded according to common ideas they conveyed. These were then assigned a descriptive category in keeping with the types of information expressed. The data were coded and the coding protected confidentiality as well as mitigated bias from the possibility of name recognition of discussants and influence on analyses. Coding was then validated by an independent, qualitative scholar, who was not associated with the study.

Data Analysis

Analyzing qualitative data based on a theoretical framework can be accomplished using a strategy known as *pattern-matching* (Yin, 2009). In pattern-matching patterns observed in the data are compared with patterns indicated by theory. To arrive at identifiable patterns, the data were analyzed according to

Table 1
Contributions from Each Course

Faculty Member	Number of Students in the course	Number of Asynchronous Assignment Discussions	Number Transcript Pages in Word
One	12	5	101
Two	11	5	107
Three	8	5	83
Four	8	5	101
Totals	39	20	392

categorical aggregation (Stake, 1995). Further, categorical aggregation establishes patterns for interpretation by looking for themes among categories. Boyer (1990) laid the theoretical groundwork for categories of scholarship as scholars are to step back from their work and look for connections, build bridges between theory and practice, and communicate their individual knowledge. This perspective was reiterated more recently: Walker, Golde, Jones, Bueschel, and Hutchings (2008) wrote about scholarship as an intellectual community in that it sends "powerful messages about purpose, commitment, and roles, [while] creating (or not) the conditions in which intellectual risk taking, creativity, and entrepreneurship are possible" (p. 10-11).

Results

Overall, the intent of the research was to discover how scholarship might develop in graduate online courses. Three major themes indicative of scholarly activity were found as a result of categorical aggregation analysis. Table 2 represents the categories assigned to scholarship.

Scholarship can be viewed as the integrity of creative work demonstrated by one's thinking, communication,

Table 2
Scholarship Themes

Scholarship	Characteristics
Recognize task difficulty	• Task difficulty • Accept task • Defer task
Pose difficult questions	• Difficult questions
Apply concepts to other fields	• Apply concepts • Personalize information • Offer advice/insight

and learning abilities (Boyer, 1990). However, online discussion may "lead to disengaged learners who fail to acknowledge new ideas, skills and knowledge" (Gulati, 2008, p. 186-187) as students are just playing the academic game because they are required to participate (Oliver & Shaw, 2003). However, the results suggest one particular type of discussion format, Muddiest Point, can promote scholarship development among online graduate students.

This research investigated the emergence of scholarship by graduate students through asynchronous discussion in an online environment. Three major themes were identified as indicative of scholarly behavior: (1) recognize task difficulty, (2) pose difficult questions, and (3) apply information to other fields.

Recognizing Task Difficulty

Recognizing task difficulty is only one aspect of scholarship. As there is an expectation for faculty to exhibit scholarship (e.g., Major & Palmer, 2006; Nicholls, 2004), so there should be the same expectation of students seeking advanced education in graduate school. However, graduate students may struggle with expressing scholarship from the content of which they are learning. As part of the process, they must interact, even wrestle, with the material. How they grapple with it can be an indicator of emerging scholarship though. Comments were made by most students to reflect this sentiment:

- "This is a difficult assignment."
- "I do not have any questions as yet but this is a very challenging assignment and I am sure there will be some."
- "I have no doubt I will be back soon with requests for assistance!"

Students recognized their lack of expertise in the area, openly admitted it, and sought further understanding: "I must say that this is one of the more challenging assignments I have done in the entire time I have been in school." While the task is difficult, one

particular response characterized, in part, the intent of the discussion: "I think that's because they designed it that way to make us interact, which I think is pretty cool." This was reiterated: "Like you, I followed the prof's instructions and went to the text first. I discovered that it took quite a bit of reading, re-reading, and taking notes to try to get a handle on the chapter regarding systems and the implications for administrators."

Students appeared to be exploring additional sources to shed light on the task. By articulating uncertainty, students were able to evaluate what they knew and did not know in order to reframe the material better, thus meeting assignment objectives. The literature deals with how students meet assignment requirements according to directions (e.g., Cox & Cox 2008; Lebaron & Miller, 2005; Palmer, Holt, & Bray, 2008), but it does not express students' willingness to seek additional material. This finding is particularly salient. If students are expected to demonstrate scholarship, they should seek information beyond those sources required for assignments. For instance, the following excerpts are a few examples:

- "I am going to use the library research tool and look at some of the other state universities in [the State]."
- "I would also like to research other states to see if they have similar issues and what they have done to reach their goals and better their governance."
- "I think you are correct about the need to research to provide additional information. I am not considering that though until I really understand what we already have. Once I really get organized with the concepts we have I will then know what additional information to go after."
- "Even though this [additional comparison] was not part of the assignment it helped me 'give a face' to the type of [faculty] senate the institution was likely to employ if they chose that route. Perhaps this will also help someone else too."
- "Even when I complete the program, I will still refer back to my research for additional insights."

Additional resources ranged from looking at Internet sites to other texts and journal articles.

Even though students recognized task difficulty, it cannot be assumed scholarship will emerge. There tended to be two types of contributions for recognizing task difficulty. These posts are critical since the perceptions students have about their study also affect their learning (Asmar, 2002).

Accept Task

Task acceptance refers to the assignment as a learning process. There were those students who recognized the difficulty, accepted it, and worked through concerns as a class:

- "Did anyone feel that the example of [the] college is a very unusual case? I have only gotten so far in my reading but I thought this was probably rare. Those of you who work at universities is this the case where you work?"
- "I also reviewed the article several times and highlighted the points I felt were important to the assignment."

They also recognized the value of the process:

- "I think everyone struggles a bit, but if you didn't, how would you learn? It's the fact that you haven't given up and keep plugging away that makes what you do learn and understand so great! We're all here for each other, so if you are ever frustrated just ask for help!"
- "This project is not only challenging but one of the most interesting that I have been involved in at this education level. I feel the results from our group participation will be very rewarding."

This comment reflected what Fink (2003) considered "doing experience" (p. 105), which refers to designing activities for students to learn what is intended.

Defer Task

A second type of response showed students deferring the difficult information for issues more comfortable to them. Du, Havard, and Li (2005) suggested new and complex assignments require students to rely on the familiar. Accordingly, students must systematize current knowledge with new information for learning. A critical component to this is that "[w]ithout reasoning, the learning cannot be deep" (Du et al., p. 209).

However, some students clearly recognized the difficulty, but their interaction tended not to extend beyond that. These types of posts began similarly as *task acceptance*, "Can anyone give me some specific examples of this to make it more clear in my mind?" However, as the discussion progressed, the shift became evident: "Still, I found the reading a bit confusing, just like my life. All I really like to do now is teach. Anything that gets in my way is junk – Ha, Ha." Task deference was further exemplified as a springboard into personal expressions:

This year my husband and I have decided that I will stay home and recover from [an] accident and work on this degree. [Some] Schools such as [State]U and U[of State] are so overpopulated that unless you play football or another sport, there are very few spaces for incoming freshmen and the athletic department gets first pick.

Thus, it is difficult for students to adapt learning to new situations when they defer the material to what is most familiar to them (Du et al., 2005) instead of developing strategies to bring information into cohesive patterns (Greene, 1995). Deference also seemed to be a matter of correspondence instead of discussion. Bender (2003) related that if students work too independently, interaction can reflect one-on-one correspondence instead of dynamic learning, for example, "Is this a first grandchild? I spend every bit of time I can manag[ing] my 5 grandchildren. It is a wonderful experience. Mine range in age from four to nine months – two four-year-olds, two 2-year-olds and one nine months." Other deference comments emerged: boring reading, job responsibilities, political viewpoints, and complaints about the difficulty of a particular software program. If students default to the familiar, it is incumbent upon the faculty member to guide the discussion toward assignment goals.

Boyer's (1990) theoretical framework of the ability to think is found in recognizing task difficulty. For Boyer (1990), scholarship included being involved in activities that continually challenge their minds, skills, and abilities. When students recognize and accept difficult tasks, they are taking first steps toward scholarship. Recognition should be directed toward formulating new knowledge structures. This incorporates course material into existing knowledge versus relying on familiar information to defer difficult concepts for convenient ones. A second major theme dealt with posing difficult questions about the subject matter.

Posing Difficult Questions

An interesting feature of the discussion surfaced during the analysis, which was categorized as posing difficult questions. Posing difficult questions refers to students' ability to ask complex questions with precision and accuracy by using the material they learned. This feature does not appear in the literature, although Ellis, Goodyear, Prosser, and O'Hara (2006) come close when they reported that discussions are a way of challenging ideas and beliefs. For example:

One of the colleges where I work was probably once a [specific type of] institution. As the college grew, it has evolved into a [another type of]

institution more closely resembling a corporation. Student satisfaction is at an all time low. Some of the students who have been here beyond the traditional four years report that they miss the individual attention that continues to get harder to find as the school gets larger and hires more people who do not know what it was once like here. My question is as follows: Do you think bureaucracy is an inevitable consequence of institutional growth?

The example demonstrates that the student not only understood the information with accuracy and precision, but he or she is able to transform it to address other problems or scenarios, which is indicative of advanced learning (Gallagher & Aschner, 1963). Online discussion formats can be created to where students engage in creative work. Boyer (1990) wrote scholarship "integrity [can be] measured by the ability to think, communicate, and learn" (p. 15):

This is a very interesting thread. As an administrator, there are some fundamental questions that must be asked of almost any situation. First, is the institution public or private? This is crucial since governance issues apply differently, particularly as it relates to the US Constitution. . . . Second, does the action (decision) follow policy? The courts are not really prescriptive in nature. . . . Third, do policies and procedures conform to local, state, and federal laws? This one is obvious. Administrators should not make policies that violate law. . . . Finally, are decisions based on one's personal views (which are not wise) or are they based on policies and procedures? It is not unusual for people to make decisions based on their own moral values or to get caught up in an emotional issue. . . . Note: there is a difference between bad management and breaking the law.

The process of scholarship gets students to ask what the key ideas are in the material, what their importance is, and the effect it has (Levine, 2007). Further evidence of this type of scholarship was related:

Does anyone else find that [the college] functions almost like a social club, more so than an institution concerned with making sure that their students are well educated (no research and no attention paid to advancements made in the field of education)?
Also, what are your takes on their practice of excluding those who think or act even slightly outside of their "norm?" A part of me feels that it is almost discriminatory. However, another part of me feels like those individuals who decide to

attend [the college] or become part of the faculty know exactly what they are getting into and if they do not plan on conforming, they should just go elsewhere.

The ability to pose difficult questions reflected the process of scholarship. One might understand it according to Kanuka, Rourke, and Laflamme's (2007) four stages of cognitive presence, where (a) there is evidence of directed and purposeful thinking, (b) students refine or redefine an issue, (c) they organize ideas and contingent facts, and (d) ideas and hypotheses are tested with peers. The stages describe how students act upon their ideas: "Hope you don't mind if I cite you in my paper. I've learned to learn from great minds like yours." Those aspects represent some of the hallmarks of scholarship as "it involves systematic inquiry and results in publicly observable community property that is open to critique and available for others to use and develop" (Colbeck & Michael, 2006, p. 7-8). On a humorous note, one student recognized the value of this process: "Ha! I've been quoted! Does that make me a scholar now?" The process is a matter of good practice according to Chickering and Ehrmann (2005), that sharing ideas and interacting with others increases thinking and deep learning, as one student indicated: "I'm impressed with your interesting discussion and the integration of examples in your postings. What impact do you think coupling has on the issues you've been discussing?" This study suggests sharing ideas is a process of an emergent scholar as well.

Another aspect of Boyer's (1990) theoretical framework is for scholars to demonstrate the ability to learn. The findings indicated graduate students show signs of learning as scholarship during online discussions as they pose difficult questions. Boyer (1990) wrote that "the probing mind . . . is an incalculably vital asset to the academy" (p. 18). These are not questions for simple understanding or clarification, but to advance complex concepts. Students already understand the material, and with posing difficult questions they exhibit learning through Kanuka et al.'s (2007) four stages of cognitive presence. There is a third theme that emerged from the inquiry.

Applying Concepts to Other Fields

The Muddiest Point discussion required students to clarify issues related to an assignment. It was discovered that students applied information beyond the requirements of the assignment to make connections to other fields. In one sense, this is what Boyer (1990) referred to as the scholarship of integration: "By integration, we mean making connections across disciplines, placing specialties in larger context,

illuminating data in a revealing way, often educating nonspecialists, too" (p. 18). Even though the interactions are from a higher education organization and governance course, one student remarked, "This reminds me of personality models that I studied in one of my undergrad psychology courses; not one person has all of the characteristics associated with a model and may have characteristics from another model as well." As Boyer (1990) conveyed, specialties are placed in a larger context. Another student explained in detail the course information related to the Washington State Higher Education Board. One student even associated a bureaucratic model of higher education governance with the corporate world:

> I worked for [a large corporation] for 15 years. They have a place for everything and everyone in his [sic] place. They are the number one bureaucratic system that I have ever endured. I am grateful for the good income I received while [I] worked there, but I became a liability when I wanted to become educated.

These contributions are particularly important given the nature of the subject matter. Higher education governance is a course in the field of higher education studies, which has no undergraduate program. Therefore, graduate students enter the field from other disciplines and academic areas. The material, for all practical purposes, is new to them. For students to apply concepts to other contexts suggests they have a grasp of the current subject matter, as well as others. According to Cohen (2001) scholarship is demonstrated by the organization and integration of knowledge into civic, research, general, and domain based activities. Examples of this type of knowledge were spread throughout the discussions:

> In my last class, foundations, I read an article that defended bureaucratic higher ed organizations and for-profits. In this article (I couldn't locate it off-hand) the author explained the structure of this type of institution and the benefits it gives a new population in the community.

> I am reminded of my grandmother's late night filibuster sessions that took place in the last weeks of this last legislative session and with that in mind I would not want to be a part of a collegial system if decisions were being debated over and over and over again.

> At my school the faculty and department chairs recently lost the ability to advise the students. They were unhappy about this change and we find that in this type of system the faculty may not be

consulted when decisions are made regarding their job descriptions.

One student even described in depth his or her son playing an online video game. The thought while reading this part of the response was: What does this have to do with anything in the course? The student then inquired of classmates: "Do you all think my son will make a good negotiator for the political faculty senate?" From this question, the connection was made, and as Boyer (1990) related, scholarship should integrate information in revealing ways while often dealing with non-specialists.

As students integrate knowledge, they also personalize the information. Chickering and Ehrmann (2005) stated that learning includes the ability to write reflectively, relate information to past experiences, and apply concepts to everyday life.

Personalize Information

Lebaron and Miller (2005) conveyed that online courses are remiss with developing active learning or camaraderie among peers. It is important, they state, to create an environment where students are stakeholders in a community. It was discovered in this study that students made personal connections. This appears to have been accomplished through the Muddiest Point discussion:

> I think I have enough background about the University to be able to relate to what was written in [the text]. My son attended this school because he got the most money there and it has a very good academic reputation. He was not happy! He felt that the rules were stupid and he did not like the close faculty student relationship. He stayed there because of money but would have like to transfer to a public university. This type of university does have many advantages but if a person is looking for a place to live a lifestyle not in agreement with the statement of belief then it would better for all involved to go elsewhere.

The type of scholarly expression demonstrated by students indicated they related interdependence, one of shared purpose. They become part of a larger society where they find value or meaning (Correia & Davis, 2008):

> After I read your post I compared some of the issues the faculty at my job deal with and I see why you are leaning towards [a type of governance structure]. They too have meetings and have to report to administrators and they have to report to higher administrators and so on and so forth. The

same process also occurs when its time for our accreditation.

As Lebaron and Miller (2005) indicated, students must become stakeholders in the learning process. They reflected about how information impacted them. Several examples exemplified this:

- "As I started to read about the political system-I have decided that I do not want to work at an institution like RSU. I am sticking with my original thoughts."
- "As a student at a school with 20,000 students I felt that my presence was irrelevant. I was lost in such a huge organization. I like to feel my influence on campus." In addition:
- "I remembered when I taught ninth grade and the students all came to me with their problems, I was a little surprised until my co-workers told me that I did something they had to think about – I cared. I hope I can continue to be that kind of teacher and later that kind of [college] professor."

It is advocated here that in order for students to emerge as scholars, they become stakeholders as they personalize information. This in turn gives them a framework to apply the information to other fields. One student captured this sentiment about another student: "Thanks for explaining and allowing us to look into your life by using it as an example because of your explanations." With a firm grasp of understanding they, also, can offer sound advice/insight to peers.

Offer Sound Advice/Insight to Peers

Scholarship is a platform where faculty, students, and the community reflect on their contributions and share knowledge (Colbeck & Michael, 2006). This is revealed as a dynamic interplay among the themes that emerged. For example, as students recognized the difficulty of the task, they often remarked the reality of the subject matter was not as clearly defined as the models in course texts suggested:

> Due to the complex nature of governance administrators formulate models to predict how an internal revision of policies and procedures will either increase or decrease the institution's functionality. Both [authors] agree that there is no ideal model. Nevertheless, the major problem that arises is determining what model(s) work best.

Another student commented:

> [S]ometimes we cannot fight two battles at the same time. One will get burned. In these cases unfortunately the students are the ones that suffer and yes we need help because our main purpose in our jobs is the students.

The value of advice and insights can be readily seen. For example, "I want all of you to know how useful these discussions are to me." And, "Thanks, you contribute a lot to the discussion board and you are there helping me along right from the start!" When students relate to each other, their understanding and learning deepens (Palloff & Pratt, 2007).

Results also exhibited advice/insights pertaining to process. Although there are many comments posted like the previous one, sound advice or insights was not limited to that type of result, as a product. "I read one post where they said to take it step by step. I want to try to go back and find out who it was because that is good advice." And:

> The easiest way around to get around losing everything you wrote it to type it up in Word first. Then you can just copy and paste it. Then if you do lose it you have it saved. Another interesting point is the fact that Word is much better at grammar and spell check then our system. That is how I got around it. Don't worry, you will get it mastered soon enough.

In graduate work where it is intellectually challenging and can be socially isolating (Brandes, 2006), there must be means and measures when students are able not only to grasp the subject matter, but show authentic signs of scholarship by interacting in an intellectual community (Boyer, 1990). For example:

> My thinking is that the first part of the paper will force me to really understand the concepts involved with governance. The second part will have me take those concepts and decide how governance will take place to reach my academic goals in spite of all the problems and contradictions.

Applying information to different contexts pertains to the third aspect of the theoretical model (Boyer, 1990)—ability to communicate. For Boyer (1990), scholars possess the ability to apply one's results to help others. By communicating one's findings, scholars give meaning to isolated facts, put things in perspective, and demonstrate how issues apply in other disciplines (Boyer, 1990). Though the results from this study are not of the magnitude of Boyer's (1990) scale, they do indicate the connectedness of scholarly activity. Discussions to where peers help each other with a difficult assignment may also help them emerge as scholars as they apply the information to other contexts. In addition, they recognize task difficulty and pose difficult questions. Table 3 summarizes these characteristics.

Discussion

Brandes (2006) related that graduate programs offer little opportunity or incentive for student interaction with their peers outside of their discipline. Online programs may further limit graduate students' contact with peers, faculty, and others outside the discipline. In turn, one could surmise this is all the more reason to develop online courses with provisions to help graduate students develop their scholarship abilities. Whereas scholarship tends to be a priority of the professoriate, it, nonetheless, is expected that graduate students demonstrate the ability to produce scholarly work, whether they are headed for the professoriate or a profession.

For scholarship to be expressed, it is incumbent among students to peer monitor their actions (Vonderwell, Liang, & Alderman, 2007) and faculty to reiterate the purpose of assignments. Thus, consistent with the research of Vonderwell et al. (2007) it is imperative for faculty to adhere to structure in order to impact student responses according to course expectations and engage them in dialogue versus just posting questions for them to answer, as students tend only to answer questions. It became evident that a Muddiest Point type of approach to discussion gave students greater freedom of expression and creativity, which tends to be consistent with scholarship (Boyer, 1990; Walker et al., 2008).

In reality, what expectations does the academy place on graduate students to reflect scholarship? Scholarship is a priority of the professoriate not student development. It reflects public expression on issues of community engagement as it integrates teaching, research, and service as faculty functions (e.g., Hutchings & Shulman, 1999; Yapa, 2006). Yet, Geiger (2007) observed graduate work is often closely linked to research, but graduate-service institutions assume a greater role of relating specialized knowledge often for providing professional advancement and occupational mobility.

Although discussions in online courses aid with critical and higher order thinking, they also can be used to help develop scholarly skills. When appropriately implemented, the Muddiest Point discussion can elicit scholarly patterns by students in three areas: (a) recognizing the difficulty of a task; (b) posing difficult questions; and (c) applying information to other fields.

Table 3
Categories of Emerging Scholarship Through Online Discussion

Category	Description	Characteristics	Representative Quotation
Recognize task difficulty	Students recognize the difficulty of the task and it requires input from others for them to grasp the material more fully.	Task difficulty	I have no doubt I will be back soon with requests for assistance!
		Accept task	I think everyone struggles a bit, but if you didn't, how would you learn?
		Defer task	This year my husband and I have decided that I will stay home….
Pose difficult questions	Students' demonstrate the ability to ask difficult questions of peers by using the material they learned with precision and accuracy		Another thing that struck me about this article is that the leadership is based on legitimate power. This begs the question, who decides the legitimacy? Does the leader adopt different forms of power to compensate? Or are some departments poorly run because they do not accept the legitimate power?
Apply to other disciplines	Students apply information beyond the requirements of the assignment to make connections to other academic disciplines.	Apply concepts	What is helping me to understand the idea of an open system actually comes from the field of psychology.
		Personalize information	I think I have enough background about the University to be able to relate to what was written in [the text].
		Offer advice/insight	This is what I have gathered so far.

And yet, the research may have raised more questions than it answered.

Conclusions and Recommendations

The findings from this research are encouraging for several reasons. First, they suggest discussion may be the most important aspect of online education. It appears to be the central place where scholarship can be interactive as students consider goals, reflect literature, apply methods, add knowledge to the field, provide results, and critically reflect upon achievements, all in a safe community environment (Glassick et al., 1997). Second, with suitable motivation graduate students explore a subject matter in depth and with purpose. They see the material as something more than a grade. Third, it indicates that online education may be in transition with the rise and acceptance of online education as a viable means for graduate work. Students may be more comfortable with their interaction and expect more from it. Thus, the level of discussion may need to reflect a greater variety of outcomes, including scholarship development.

These issues also raise questions. The results signify that students recognized some tasks are difficult. Nevertheless, for the most part they embraced challenges as something to enrich their experience, as well as provide possible contributions to the academy. Yet, students were not making contributions to the academy. They were asked only to meet assignment requirements. In doing so, they showed signs of scholarship. If scholarship is not an explicit or even an implicit goal of a course, then at minimum, it is recommended that online discussions should be designed with sufficient difficulty and freedom for graduate students to rely on their experience and penchant for problem solving (Knowles, 1980). They should be given an opportunity for professional expression. With regard to scholarship, what are the expectations for online graduate students? If they are headed to the professoriate, the expectations ought to reflect the scholarship of the discipline. Asynchronous

discussion formats can promote this attitude toward learning. If students are headed to the professions, how much does the expression of scholarship matter? Given the recognition of task difficulty, future research might examine the question with regard to scholarship: How does this experience promote scholarship in order to benefit the academy?

More questions from this research arise as students posed difficult questions. This could be dismissed as a unique characteristic of this research. Except, discussion is not a unique characteristic of online learning. It is a staple. It is a collaborative tool by which students learn to work together on complex issues (Havard et al., 2005). When students are able to grasp difficult material, they raise issues not only congruent with the topic, but also demonstrate deep learning. Ultimately, asynchronous discussions are about learning not critical or higher order thinking. So, how important is the ability to pose difficult questions in light of learning objectives for an assignment? This may be a matter left to specific assignment design within specific academic disciplines. Yet, in light of the findings, it could be an indicator of scholarship within specific disciplines. It is recommended when asynchronous discussions are designed, requirements about how students express information are considered. Possibly, a fundamental question could be asked: If students participate in Muddiest Point or similar discussions on a regular basis, over time how will they develop skills readily discernable as scholarly? Whatever the approach, students should not be assessed beyond the limits of the learning objectives. Future research could look at learning outcomes for asynchronous discussions. Are they narrow and restrictive or do they allow students to express not only uncertainty of understanding, but when grasping material, show insights through asking questions, demonstrating discrete knowledge of the field (Glassick et al., 1997)?

Finally, the findings showed students were able to make connections about a specific subject matter to other fields. Since this inquiry revolved around higher education studies, which is a field only in graduate work, a natural default may be for students to relate concepts to their previous undergraduate major. But, what if a student's graduate studies are in the same discipline as his or her undergraduate study? Is it enough to relate graduate information narrowly or should students show how other fields or broader contexts are affected? Should graduate students be able to explain where fundamental principles of their discipline can benefit other areas of knowledge as Boyer (1990) suggested? One recommendation is to encourage students to demonstrate how claims they make about their subject matter may impact a larger context parallel to or outside their field. Future studies, then, may look at how students in specific disciplines relate to various other academic fields and professions, as well as impact a larger context.

Conclusion

Asynchronous discussions are an integral part of online education. For the most part they have been relegated to the development of critical and higher order thinking among students. Although important, thinking skills should not be the outcome of discussion but a means to achieve learning. This study looked at achieving other results by examining the process of how graduate students reflect scholarship in online courses. It was found that graduate students will rely on their experience, expertise, and each other to express scholarly behaviors. Three major themes emerged to describe scholarship behavior: (a) recognize task difficulty; (b) pose difficult questions; and (c) apply information to other fields. Overall, when given the occasion, graduate students in this study welcomed the opportunity to express a full range of knowledge and competencies. As such, they were not only learning the material, but showing signs of scholarship.

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Present Practices and Background to Teaching and Learning at the Royal University of Bhutan (RUB): A Pilot Study

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In Bhutan relatively few studies at the higher education level have been done and fewer still reported in international journals. This pilot study highlights the present practices and culture of teaching and learning at one of the teacher education colleges of the Royal University of Bhutan (RUB). It looks broadly across the issues of teaching/learning practices and identifies ways forward in teaching and learning. It is largely qualitative research based on constructivist principles using the case study design. Multiple methods were used including lesson observations, focus group discussions, questionnaires and interviews to seek answers to the questions of this study. The study found that college lecturers' behaviors varied between teacher-centered and learner-centered practices. Although lecturers were conversant with many of the concepts of learner-centered pedagogy, there were some grey areas in understanding notably in assessment and evaluation. Planning, implementation and assessment practices were only to some extent congruent with RUB policies and the present situation can be largely understood through a socio-historical analysis as well as the resource base to the teaching and learning approaches and academics' knowledge and experiences.

Gross National Happiness (GNH) is the guiding philosophy of the Royal Government of Bhutan and Education in Bhutan is viewed as one of the fundamental ways to achieve GNH (Royal Government of Bhutan, 1999). With the recent establishment of the Royal University of Bhutan (RUB), a new and different set of policies and procedures has emerged. These are set out in the RUB's key policy document entitled the *Wheel of Academic Law* (Royal University of Bhutan [RUB], 2006). In particular, one of the policies focuses on student learning outcomes. This policy intends to compel RUB staff to make a conceptual shift from their historical use of the input model (transmission/teacher-centered) to a learning outcomes model with students becoming responsible for their own learning (constructivist/learner-centered). Given that students learn in different ways and that teacher educators should model a range of teaching and learning practices, it was critical and timely to examine the nature of the teaching and learning practices at the RUB and find ways forward to improve them. The purpose of this paper is to identify the nature and the extent of the gap between what is intended, as set out by the Royal University of Bhutan, and what is actually practiced. Given the current stage of development of teaching and learning in Bhutan at present this is accomplished using the concepts that are current in Bhutan, namely, learner- and teacher-centeredness.

Literature

Bhutanese education discourse has only recently entered the debate on "teacher" and "learner-centeredness" (Dorji, 2005, p. 117). Internationally, debates on teaching and learning in HE have emerged like those of Prosser and Trigwell (2002), Ramsden (2003), Entwistle, Skinner, Entwistle, & Orr (2000) in the UK; Barr and Tagg (1995) in US; and Bowden and Marton (1998) and Biggs (e.g., 2003) in Australia illustrating that outside Bhutan the push is to more learner-centered approaches in HE. They provide the direction for this RUB policy. In the next sections we contrast learner-centeredness with teacher-centeredness.

Learner-Centeredness

Learner-centeredness is not a new concept and its roots date back to the progressive education movement as early as Dewey. Since then there has been a vast literature for schools and more recently for higher education (HE; Burnard, 1999) on this topic. Over time, learner-centeredness has become a term that encompasses a variety of different educational ideas and practices. Pedagogically, learner-centered practices are more clearly connected to constructivist approaches.

Defining learner-centeredness. Many terms have been linked with learner-centered learning, such as flexible learning (Taylor, 2000), experiential learning (Burnard, 1999), and self-directed learning. Consequently, the slightly overused term "learner-centered learning" can mean different things to different people. This can lead to confusion. Burge (1989) explained that the concept of learner-centeredness is sophisticated because its components require a lot of fast processing and decision-making. They are "cognitively tough, challenging, and multi-faceted" (Burge, 1989, p. 1). To put it simply, learner-centeredness is a learning model that places the student (learner) actively in the center of the learning process. Instructional approaches are used in which students influence the content, activities, materials, and pace of learning and even the assessment process.

Learner-centeredness in HE and teacher education. Though traditionally learner-centered practices have been most evident in school settings, there is a growing awareness that they are equally important in HE, particularly in teacher education. For quite some time now, learner-centeredness and the drive to adopt it as the central pedagogy of university courses, has been recommended by many (see above). There is research to show that adults are more able to be self-directed and reflective and to articulate learning goals, and they are more disposed to bring their life experiences to what and how they learn (Smith & Pourchot, as cited in Kerka, 2002). Accordingly learner-centered practices should be appropriate for HE. Despite its significance, research on learner-centered practices in higher education have not been all that common.

McCombs (2001) and McCombs and Lauer (1997) emphasise that learning through learner-centered practices in higher education is framed by factors similar to those identified in elementary and secondary schools: (a) establish positive personal relationships, (b) honor students' ideas and opinions, (c) facilitate higher order thinking, and (d) address students' individual needs and beliefs. Given the assumption that teacher educators model teaching learning practices for their students, the former need to be well versed in, and practice, learner-centeredness. However, the learner-centered approach is not without its critics.

Criticisms. The main critique of learner-centeredness is its focus on the individual learner at the expense of substantive curriculum content. In addition, there can be difficulties in implementation. Chief amongst these are lack of teacher knowledge of successful practices, lack of resources, the lack of congruence of belief systems of the students and staff, and related to this students' lack of familiarity with the approach. These problems, particularly the latter, apply to the Bhutanese higher education context.

In conclusion, the term "learner-centeredness" is interpreted differently but a working definition can be arrived at (see above). The Learner-centered policy at the RUB is consistent with higher education literature and it has particular importance for teacher educators.

Teacher-Centeredness

The teacher-centered approach on the other hand is associated chiefly with the transmission of knowledge. Harden and Crosby (2000) describe teacher-centered learning strategies as a focus on the teacher transmitting content, from the expert to the novice. "Teachers in a teacher-centered environment decide for the learner what is required from outside the learner by defining characteristics of instruction, curriculum, assessment, and management" (Wagner & McCombs, 1995, p. 32).

They usually focus more on presenting content than on student processing the content. Instruction is the activity in which the information (i.e., knowledge, skills, attitudes, values, etc.) is handed over to the learner (Kember, 1997). In the teacher-centered approach, teachers act as the center of knowledge selection and presentation, exercising the power to decide and control the students' learning and usually treating everyone alike. It is on these very premises that teacher-centeredness is rigorously criticized in Bhutan as elsewhere.

Bhutanese Experiences

Phuntsho (2000) in "On the Two Ways of Learning in Bhutan" compares the practices of traditional education with what he terms "modern education." His modern education contains some elements of learner-centeredness. For Phuntsho (2000), "traditional" refers to practices in, and derived from, those in Buddhist monasteries. Table 1 contrasts the two styles in Bhutan identified by Phuntsho (2000) and in so doing provides a valuable insight into the historical and cultural perspective of education in Bhutan.

These traditional practices are mirrored in schools where there is a three to four decade history of teaching dominated by teacher-centered approaches since Bhutan's secular education was established through the influence of teachers from the Indian sub-continent (see Maxwell, 2008). Thus RUB lecturers themselves largely only had personal experiences of traditional teaching/learning. The advent of the RUB represents a new era in education in Bhutan – one that signals its readiness to establish its own HE teaching, training and knowledge creation capacity (Maxwell et al., 2006). Implicit in such a development, as pointed out by Reid (2007), is the fact that this university, like Bhutan itself, faces particular challenges concerning internationalization and retention of its culture. The RUB has made a stand through its adherence to GNH.

The Wheel of Academic Law (RUB, 2006; 2008a) and *The University Strategic Plan 2004-2012* (RUB, 2007a) are the RUB's two key policy documents that require staff to become more learner-centered. Consistent with this, recent College documents such as the *B.Ed. Syllabus Handbook* (RUB, 2008a) advocate learner-centeredness with focus on "learning by doing" (p. 4). Moreover, the RUB has created the Centre for University Learning and Teaching amongst whose tasks is to assist in the development of more learner-centered teaching and learning practices (Maxwell, Reid, Gyamtso, & Dorji, 2008)

In summary, the growth of secular, western-style education since the 1950s has been strongly influenced by Indian teacher-centered practices as well as by the socio-cultural influences from the monasteries. This

Table 1
Traditional vs. Modern Learning (Phuntsho, 2000)

	Traditional	Modern
Purpose	Mainly introvert Spiritual Training culminating in Omniscience	Mainly extrovert skills for human development
Content	Religion or Religion Oriented, Liberal	Secular and Scientific, Technical
Approach	Mostly passive reception, static, conservative	Mostly Active Innovation, Creative, progressive.
Perspective	Faith, Reverence, Sanctity, For Religious Edification	Interest, Curiosity, Rationality, For Acquiring Knowledge and skills
Medium	Chökey/Dzongkha [1]	English
Methodology	Buddhist monastic methods memorization, debates, contemplation, exposition, etc.	Systematic western educational techniques of critical scrutiny, statistics, experiments, etc.

Note. [1] Dzongkha is the national language. Chokey is the language of the Buddhist texts.

creates particular problems for RUB's intent to move teaching learning practices to more learner-centered approaches.

Research Questions

The study reported here is a pilot developed as part of a larger study of Colleges in the RUB. The key research questions were:

1. What is the nature of teaching and learning practices at one of the Colleges of Education?
    *   Planning: What characteristics do lecturers' planning for teaching and learning demonstrate?
    *   Implementation: What characteristics do the lessons possess?
    *   Evaluation: To what extent do the evaluation techniques applied by the lecturers support students' learning?
2. What Factors facilitate or impede these practices?
    *   How do the cultural factors support teaching and learning practices?
    *   What resources support the teaching and learning practices?
    *   How do the academics' knowledge and experiences influence the teaching and learning practices?

Method

This pilot study is a based on constructivist principles using a case study design. A multi method approach was used to gather data including: (1) eight lesson observations (videotaped with permission and using an observation guide) randomly selected from the eight subject departments; (2) in-lesson questionnaires completed by students immediately after the observed lessons; (3) standardized open-ended interviews before and after the lesson observations with each lecturer; (4) informal conversational interviews using stratified sampling with the teaching and administrative staff on the various resources of the college; (5) a focus group discussion on evaluation practices amongst academic staff; and (6) field notes were also used. The focus group discussion was led by a colleague (as required by UNE ethics) and was recorded. The field notes were meticulously maintained during the entire study. Participants were academic staff ($n = 8$), students ($n = 222$) and administrators ($n = 5$). To address the second question analysis of policy documents and of cultural writing was undertaken as well as gathering data on background characteristics of staff available in documentation in the college and elsewhere. The whole study was set out using a research design matrix (Maxwell & Smyth, 2008; Smyth & Maxwell, 2010). Responses had to be interpreted carefully. Bhutanese are not used to being asked their opinions and culturally they tend to defer to authority. Judgments were made against criteria (using observational guidelines) to assess lesson type (learner-centered (LC), or teacher-centered (TC) or a blend of both (LC/TC). Interviews and similar qualitative data were analyzed for key themes. Meanings were extracted from data sources separately then triangulated to inform the responses to the research questions.

Results

The outcomes of the study establish that the nature of teaching and learning practices at one of the colleges of RUB is in the "middle" (i.e., that it is neither completely teacher-centered nor learner-centered). There are some grey areas in the understanding of concepts and theories especially those related to evaluation and assessment techniques. The following analysis is organized around the research questions rather than by technique (Bazeley, 2009).

Nature of Teaching and Learning Practices

Planning, implementation and evaluation are addressed in the sections that follow.

Lecturers' planning for teaching and learning. A comparative analysis of eight lessons captured the essence of what actually went into the planning of eight lesson plans (see Table 2). Judgments were made about characteristics from teacher centeredness, through teacher-centeredness blended with learner-centeredness, Learner-Centeredness blended with Teacher-Centeredness to Learner-Centeredness against a pre-developed rubric. For example, the use of the term "learning outcomes" is seen as learner-centered as these are statements describing what students should know or be able to do as a result of learning as set out in the *Wheel* (RUB, 2008b).

Firstly, there is no uniformity in the characteristics of the work plans. One is consistently TC. All the others have some combination of LC and TC with three tending toward LC in their *planning*. Secondly, some of the lecturers appear to follow the prototype of the syllabus handbook *B.Ed Syllabus Handbook* (RUB, 2003) which is essentially learner-centered in its approach. Thirdly, there is variation in work plans despite the model provided. For example, some of the work plans contain detailed aims and objectives, content topics, assessment tasks, instructional strategies and marking schemes suggesting a learner-centered approach. Others are simply lists of topics with little information on the assessment tasks and instructional strategies. As seen from the Summary of Findings, there is a mix of teacher and learner-centered practices for planning, though teacher-centeredness is more evident.

Characteristics of lessons. Two sources of data collection (lesson observations and in lesson questionnaire) enabled the key features of the observed lessons to be identified. It is important to clarify that lecturers knew that they were to be observed. The lessons need to be interpreted as the "best possible" lessons. This is especially the case in Bhutan due to cultural influences where the observer was a senior person. The student statements from the in lesson questionnaire illustrate the realities faced in this kind of research:

- "today's lesson was far more better (sic) as compared to the previous one as more number of activities were carried out";
- "more teaching aids were used in the lesson, excellent teaching compared to previous lesson, imparted more information, and provided activities in groups";
- "well organized and structured in sequence compared to previous lessons"; and
- "I would like if Sir could give us different activities and make us do our activities in pairs like we had in present class." (21.03.08)
-

However, not all lessons were different:

- "same as usual"; and
- "lesson well planned as before" (14.03.08)

Firstly, the most distinct feature was a mix of practices in the classrooms where teacher-centeredness and learner-centeredness were used in varying degrees. There wasn't one single lesson that demonstrated all seven characteristics of learner-centeredness. Analysis of the video clips indicated some strong features of teacher-centeredness in the lessons with lecture inputs in the beginning where the students are in some ways treated like "vessels to be filled." Ironically, in the Child Development Studies' lesson, theories were explained to the students as they were in the Science lesson on Concept Mapping. Typical student comments for the latter lesson were: "was well sequenced and planned," and "was a detailed informative session."

However, learner-centered features in the lessons were evident. This observation was supported by the students' own observations as illustrated by these typical comments:

- "organized activity-based learning in groups and gave good feedback to group presentations";
- "active participation of students was encouraged being allowed to express their views"; and
- "the group activity was interesting with good discussion and presentation and monitoring during the activity."

Secondly, in some cases the notion of organizing activities in the lessons appeared to be something that was done to keep the students busy. This is a misunderstanding of the constructivist approach to learning inherent in student-centered practices.

Table 2
Characteristics of Lesson Planning

Characteristics of lesson	Professional: Bhutanese Education System	Education Psychology: Learning Process	Dzongkha: Dzongkha for Communication	English: Study of Critical Essays	Social Studies: People & the Land	Science (Biology): Plant Kingdom	Maths: Advanced Algebra & Calculus	Health & Physical Education: Sports Medicine
					Type of Lesson			
Goals and Objectives	TC & LC	TC	LC &TC	LC & TC	LC	TC	TC & LC	TC
Organization of Curriculum	TC & LC	TC	LC	LC & TC	TC & LC	LC & TC	TC & LC	TC & LC
View of Knowledge	LC	TC	LC	LC	LC & TC	TC & LC	TC	TC
Role of Teacher	LC	TC	LC	LC	TC & LC	TC & LC	TC	TC
Role of Learner	TC & LC	TC	TC & LC	TC & LC	TC & LC	TC & LC	TC	TC & LC
Summary of Findings	TC & LC – 3 LC - 2	TC - 5	TC & LC – 1 LC & TC – 1 LC - 3	TC & LC – 1 LC & TC – 2 LC - 2	TC – 1 TC & LC – 3 LC & LC - 1	TC – 1 TC & LC – 3 LC & TC – 1	TC – 3 TC & LC – 2	TC - 3 TC & LC – 2

Note. TC = "teacher centered"; LC = "learner-centered"

Activities should not be organized for the sake of it but for meaningful learning to take place to achieve outcomes.

Thirdly, while a reasonable mix of strategies was evident rigor was missing in the lessons, that is, lessons showed insufficient conceptual depth. At times the techniques of learner centeredness were being applied in shallow way, while a much more challenging and stimulating approach was possible. In two lessons in particular, the tasks set were not as demanding as they could have been. That is, the issue is not the inappropriateness of the task per se, but rather the substance and level of the tasks assigned. The tasks were more like Marton and Säljö's (1976; as cited in Biggs, 1976, 2003) concept of surface rather than deep learning. Alternatively, two other lessons engaged the students in slightly more deep learning. Here depth learning was emphasized, active responses were elicited from students by questioning, presenting problems and teaching in such a way as to explicitly bring out the structure of the subject (see Marton & Säljö, 1976, as cited in Biggs, 2003, p. 14). Some of these attributes were also present in three different lessons.

Fourthly, the Dzongkha lesson was a complete surprise. Phuntsho's (2000) analysis indicated that a traditional approach would be more likely. However, to the contrary, it was by far one of the most learner-centered lessons observed. It had individual activities wherein the lecturer had brought in the week's newspaper[1] (in Dzongkha), distributed sheets of it to the class and asked them to read and find out the commonly mispronounced words. This was a creative idea as it related to their everyday activity and made sense. Reading the words aloud and repeating them till they pronounced them correctly as a class activity was entirely appropriate. Webb (1997, as cited in Biggs, 2003) explains that there is a common misconception that memorization indicates surface learning. On the contrary, it is appropriate in such cases of difficult language learning.

In answer to the question, "What characteristics do the lessons possess?" the in-lesson questionnaire data corroborated the lesson observations. The lessons had a combination of both teacher- and learner-centered practices with surface learning characteristics and activities for the sake of them evident in a few. It is likely that, given RUB policy and the fact that the observations were taking place, more learner-centered-influenced lessons were observed than would normally be the case.

Are the evaluation techniques supporting students' learning? The focus group discussion with eight, randomly selected lecturers across the subject departments was organized. The arena for the

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[1] *Kuensel* was for many years the only newspaper until recently. Printed in English and Dzongkha, it was distributed widely throughout the country and is thus a readily available resource.

discussion using 14 questions was the previous year's moderation meetings of the College's evaluation process. Moderation includes reviews of exam question papers and answer scripts, the coursework, performance of the students, the final results in each subject departments and the resulting issues.

Firstly the most telling evidence concerned the lecturers' view of knowledge. 47% of the discussions convey teacher-centered perspectives with a smaller 33% reflecting a learner-centered outlook. The greater proportion of lecturers having a teacher-centered approach (knowledge exists in the lecturer) contradict the discussion covering four areas of learner-centered evaluation practices. This reflects the lack of congruence of basic ideas about knowledge and evaluation practices.

Secondly there were a variety of perspectives among the participants on issues related to assessment. Ideas would be stated and then contradicted by the same speaker, or, one statement would be contradicted by another person. For instance, some would say a variety of methods were used in assessing students while others mentioned only one method. There is a rather mixed perspective on assessment practices in the college and from the discussion it seems that some of the lecturers are practicing learner-centered assessment practices while others are not.

Thirdly, there was also confusion among the participants of evaluation/assessment concepts. For example, the first question asked about the ways assessment was "treated by staff and students." It was actually addressed by only one participant out of eight. This is disquieting as the higher incidence of the data in favor of teacher-centeredness suggest that about one half of the respondents still view assessment to be an exercise to sort and monitor students summatively not as an integral part of learning. Perhaps one third see assessment as an integral part of learning. None see the importance or even the potential of performance-based assessment. However in the commonality shared by both approaches, about one quarter view assessment as a way of discovering whether learning has taken place. These data imply that most assessment practices are not practiced in a learner-centered manner and so not directly supportive of students' learning.

Moreover, formative, summative and diagnostic assessments were mentioned but their purposes were not clearly established. There was a lack of conceptual clarity, or agreement, about what key concepts meant. Three respondents referred to course work as formative assessment whereas the course work is marked in a way that cannot be regarded as a part of knowledge construction/assisting learning. Only one participant mentioned diagnostic assessment, a very learner-centered characteristic. There was also silence on basic ideas especially for the question regarding the balance of formative and summative methods.

Fourthly, learning in the class was mostly aligned with summative assessment especially where coursework tasks were taken into account as well as final examinations. The B.Ed curriculum is modularized, each module with its own discrete assessments as part of coursework with a consequent reduction in the final semester-end assessment. But these coursework assessment tasks are treated like mini summative tasks. The evidence pointed towards the practices being similar to a "modern assessment environment in a teaching-oriented institution" (Gibbs & Dunbat-Goddet, 2007) as: "characterized by frequent summative assessment of a wide variety of forms, very low levels of formative-only assessment and oral feedback, with clear specification of goals and standards and aligned curricula" (p. 26). Thus, the evaluation practices in the college were essentially summative in nature. This is contrary to the well articulated college academic documents like the B.Ed Syllabus Handbook and the *Wheel*.

Summary of Findings

The overall analyses of the first research question presented a picture of mixed practices in planning, teaching and assessment among the lecturers across the different subject departments. In the planning component, there was relatively more teacher-centeredness. In the teaching component, where lessons were likely to be the best possible, approaches to teaching and learning varied where some were visibly teacher-centered and others more learner-centered though it could be interpreted that lessons were more teacher-centered in nature than observed in this study. Surface learning characteristics were evident in some of the lessons. For the evaluation component, the practices were largely teacher-centered with summative forms of assessment being used most commonly.

RUB policy documents indicate a move toward learner-centeredness. The mix of practices indicated that some congruence of practice with policy had been achieved as many lecturers had incorporated learner-centered ideas though some still maintained the teacher-centered approach. Perhaps with time, the focus will be more on the students' learning and in that way the lecturers will be modeling such practices for their student teachers.

Factors Affecting Teaching and Learning

To answer this question a number of factors either enhance or impede teaching and learning practices. Four critical factors were found in the context of the College from the interviews and from our close knowledge of the background of the college itself over many years:

- historical-cultural;
- resource base;
- the teaching and learning approaches; and
- academics' knowledge and experiences.

Historical-cultural. Culturally, education in the college has been influenced by the socio-cultural history of education in Bhutan. From the 8th Century AD to the early 20th century monastic education was the predominant form of education in Bhutan. Learning was traditional in the sense that the approach was dependent on rote learning and memorisation based upon key texts. Phuntsho (2000) argued in "On the Two Ways of Learning in Bhutan" that these earliest educational experiences in Bhutan have influenced teaching and learning in Bhutan. Buddhism remains important for the majority population in Bhutan and even the southern Bhutanese have a Hindu background and their religious heritage is similar in process. The second feature influencing teaching and learning in Bhutan is also historical but more modern. The introduction of secular education towards the end of the 1950s made education increasingly available to the common people (Maxwell, 2008; Phuntsho, 2000). It affected all sections of society and brought about unprecedented changes in the social, cultural, political and economic structures in Bhutan. Of considerable influence was the import of the Indian system of education with its roots deep in the 19th and early 20th centuries' British system (Brooks & Jones, 2008). During the early period the school curriculum was largely imported from India and all the teaching materials were those prescribed for Anglo-Indian schools, except for Dzongkha (Gyamtso & Dukpa, 1998). At the same time, teachers with the teacher-centeredness characteristics of Anglo-Indian schools were also recruited from India as the country lacked teachers. Moreover the Dzongkha teachers were, and still to a great extent are, ill prepared to teach in the modern education context (Phuntsho, 2000). Historically, teachers in Bhutan are viewed to be discipline-keepers and knowledge-providers in control of their classes which is somewhat consistent with the cultural or societal norms (Jamtsho, 2004) and more in keeping with teacher-centeredness. The evaluation system was externally examination oriented. Students were mainly assessed on the regurgitation of knowledge by the learners although in recent years some freedoms have been introduced mainly in the primary sector (Maxwell, Rinchen, & Cooksey, 2010). Consequently, the nature of the curriculum, importance of the exam system and the experience of the teachers' own learning background compelled a particular learning style based on teacher-centeredness to develop.

Only after 1985 did some elements of learner-centeredness gain a foothold in the education policies, and to some extent classroom practices (Dorji, 2005) following policy borrowing from international consultants in a major project. However, Dorji (2005) found that the learner-centered approach had not materialized as intended. This was due to severe systemic limitations such as the shortage of qualified teachers, lack of sufficient support and guidance from the center, availability of resources, mismatch between the physical establishment of schools and increase in enrolment (Dorji, 2005). Again, the individual biographies of teachers, who had been schooled in the teacher-centered form of teaching, were important. Students of these teachers came to be teaching in the RUB. To explicate the matter a little further, an informal survey undertaken in November 2008 among the College lecturers revealed:

- 100% said that their primary and secondary education was mostly teacher-centered. It is noteworthy that almost all students attend schools in Bhutan;
- 80% said that their Bachelor degree in education was a mix of teacher- and learner-centered practices. These degrees are taken both within and outside Bhutan with a majority of the latter; and
- 70% agreed that their Masters was mostly learner-centered and these degrees are largely from outside Bhutan.

Teacher-centered practices thus formed an important part of the biographies of Bhutanese academics in the College. These practices became part of the College's history also as academics will reproduce what they have experienced. What has been learnt over a considerable time in Bhutan will be hard to modify (Maxwell et al., 2008).

Another manifestation of the impact of culture is in the practice of lecturers being absent from the college on matters such as personal and official duties. Since the lecturer is not present the practice is for the students to work in the library. However, the library does not have enough resources to gainfully occupy a whole class. Alternatively, in order to compensate for the lost time, some lecturers do organize extra classes to cover syllabus points that were otherwise missed. This practice is actually resented by the students, as they have to take time away from their other activities (students, personal communication, September 2008).

Resources. A study of the College's resources and facilities reveal that extensive upgrading is required in order to support learner-centeredness. Though the facilities and resources served well in the past, there is need for extensive improvement and as quality teaching and learning are dependent on them. In particular library facilities are insufficient (Maxwell et al., 2008) and Internet services are unreliable and inadequate.

Students are paid monthly stipends by the Royal Government of Bhutan (RGoB) to study and most live on campus. Studying and living in the college is an important part of the student's life. However, they are distracted and troubled by congestion in the hostels, water shortages, erratic printing and photocopying facilities, limited access to the Internet, and waiting in long queues for their meals. These have an adverse effect on the learning of the students, as they will be preoccupied by these trivial but basic essential services and facilities. This problem gets further compounded as the student numbers are increasing. But somehow the students have so far been rather accommodating. Three new self-catering hostels have been constructed to ease the accommodation problem.

Academics' knowledge and experiences. While resources are important, academics' knowledge and experiences are fundamental to teaching and learning practices. According to Beeby (1966) and many others, the quality of education mostly depends upon the quality of the teaching staff, their academic and professional qualifications, commitment to work and experiences. The College has 54 lecturers with the student to lecturer ratio of 17:1.

An earlier analysis of the profile of the academic and professional qualifications revealed that the academic staff was a relatively young one (see Figure 1) and so relatively inexperienced. More than 50% were aged between 30 and 39 years.

In terms of academic expertise there are a relatively high number of masters degrees in substantive areas, commonly coupled with a professional qualification such as the Post Graduate Certificate in Education (PGCE), though several hold only a Bachelor as their first degree (see Figure 2). One third holds a Masters in Education. Only one has a Ph.D. while two are currently undertaking doctoral studies. All higher degrees are earned outside Bhutan. With so few staff with doctorates academic leadership

is largely dispersed amongst those with masters degrees.

Over the last 10 years or so, most of the academic staff have gained considerably from their overseas higher degree or short-course studies where it would be hoped they had developed academic rigor and discipline, higher levels of research and writing abilities and broadened understandings (Brooks & Jones, 2008) besides being exposed to the current methodologies of teaching and learning. Thus the knowledge and experiences of the lecturers has to a certain extent influenced the teaching/learning culture at the College. Additionally, in-house programs are conducted on regular intervals to share innovative teaching ideas and research activities are also encouraged on specific areas.

With respect to the teaching of school substantive content, coverage by appropriately educated staff is generally good (see Figure 3). However, the teaching of Professional Studies, such as Teaching Skills, does not have core specialist lecturers and all lecturers are expected to teach in this area even though some will not have been teachers themselves. The Science department has the highest number of staff as the College has been identified to concentrate more on the training of science teachers since 2008.

In summary, the picture that emerges is one in which much is desired. There was a range of factors which assist in the explanation of the continuation if not the preponderance of teacher-centered practices at the College and the slow uptake of learner-centered practices. Amongst the former are the historical-cultural background and the biographies of the lecturers themselves coupled with the lack of resources at the College. Contributing to the latter are the lecturers' own efforts in gaining higher degree qualifications and the formal and informal learning that has taken place and brought to the College from overseas.

Figure 1
Age Profile of College Academic Staff (Maxwell et al., 2006, p. 11)
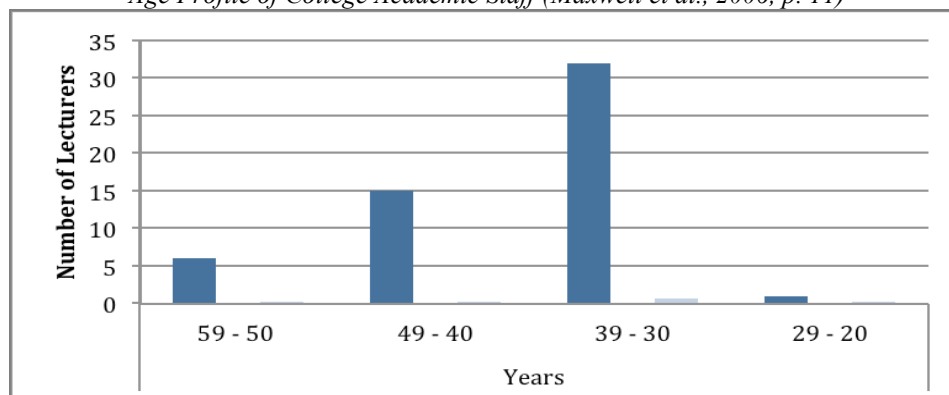
Figure 2
Qualifications of the Faculty (Maxwell et al., 2006, p. 12)
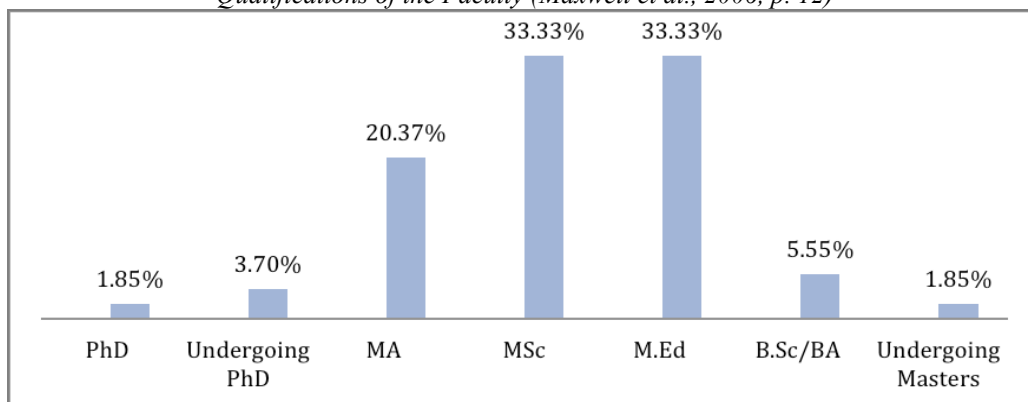
Figure 3
Staff by Subject (Maxwell et al., 2006, p. 13)
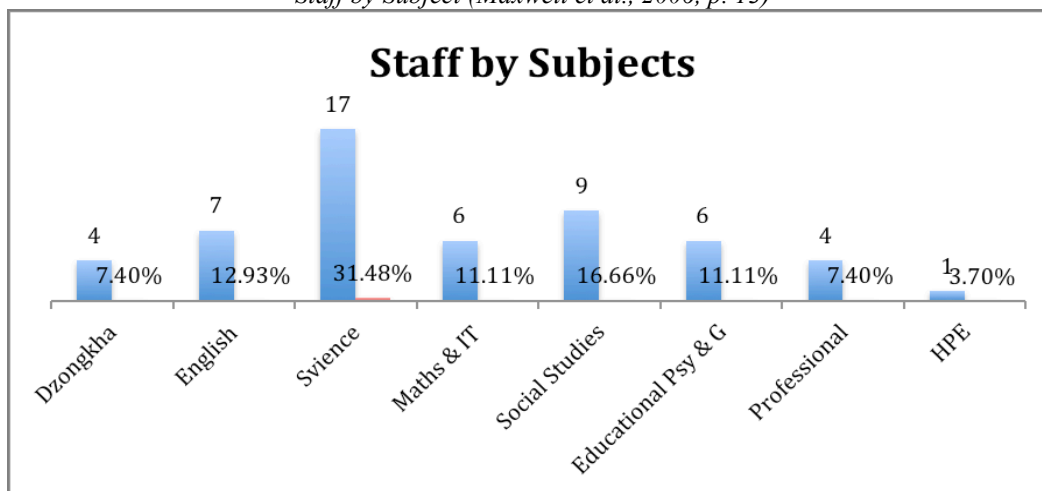
Conclusions

The study clearly established that the nature of teaching and learning practices at the college range in the middle ground of the teacher-to learner-centered continuum. Given the factors affecting teaching and learning in Bhutan it is somewhat surprising that learner-centered practices have taken a hold to the extent they have. The evidently learner-centered policy of the RUB's *Wheel of Academic Law* (2008b) has quite some way to go before being fully implemented.

Resources urgently need updating and upgrading in order to support effective teaching and learning in the college. In undergraduate courses such as the B.Ed., there will remain a primary requirement for paper-based resources and so the library must develop adequate collections in that form to support teaching and learning in the field of education (Maxwell et al., 2006, 2008). Similarly other resources must be

enhanced so that quality teaching and learning can take place. Doctoral qualifications are urgently needed.

A significant issue identified was the extent to which lecturers were conversant with the current pedagogies and related issues (Brooks & Jones, 2008). Grey areas in the understanding of concepts were identified especially those related to evaluation and assessment techniques. Additionally, learner-centered activities were seen to be at times superficial, leading to surface learning.

Even so, all is not lost. On the positive side, the study reflects that some good practices are happening and that given some motivation, good practices *can* be implemented. Clearly there is work to be done. The Vice-chancellor's report to the University Council (RUB, 2007b) indicated that tertiary education has remained grossly underdeveloped therefore considerable investments have to be made. Then only can the teaching and learning practices become more

congruent with RUB policies and so cater to the emerging needs of the country. Without the required investments in higher education, it may be unable to support the current philosophy of Educating for GNH in Bhutan.

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Educating the Disagreeable Extravert: Narcissism, the Big Five Personality Traits, and Achievement Goal Orientation

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Despite the fact that longitudinal data have been compiled over the past 30 years among undergraduate students in higher education settings regarding narcissism, the literature is devoid of empirical investigations that explore the relationships between narcissism and learning. Because the data suggest that narcissism scores are increasing each year among this population, an exploration of the relationship between narcissism and learning is timely and warranted. Sampling from university undergraduate students, this study uses the Narcissistic Personality Inventory, the Big Five Inventory, and the Achievement Goal Questionnaire to verify the known relationships between narcissism and the Big Five personality traits of extraversion and agreeableness; to verify the known relationships between the Big Five personality traits of extraversion and agreeableness and goal orientation; and to explore a previously undocumented empirical relationship between narcissism and performance goal orientation. Results of this exploratory study indicate that while narcissism does contribute to a performance goal orientation, it is not a substantial variable in determining achievement goal orientation in general. The study addresses the implications and limitations of this research in addition to areas for additional investigation.

When considering those variables that impact student learning, it is often easy to overlook or otherwise discount the significance of individual personality and its role in the learning process. While, as educators, we may deftly identify certain archetypes that contribute to our collective consciousness of "student," we may fail to recognize that the individual personalities of our students factor significantly into their cognition. Of late there has been considerable interest in and a growing discussion of the personality construct of narcissism among undergraduate populations. Social psychologists, particularly those interested in generational phenomena, draw from convenience samples of university undergraduates in an exploration of the dynamic interactions between narcissistic personality and social contexts (e.g., Twenge, 2006; Twenge & Campbell, 2009; Twenge & Foster, 2008; Twenge, Konrath, Foster, Campbell, & Bushman, 2008).

Despite the fact that longitudinal data have been compiled over the past 30 years among undergraduate students in higher education settings regarding narcissism, the literature is devoid of empirical investigations that explore the relationships between narcissism and learning. Because the longitudinal data suggest that narcissism scores are increasing each year among this population (Twenge et al., 2008; Twenge & Foster, 2008), empirical attention must be given to the impact that this reportedly pervasive personality construct has on student learning.

Narcissism

An "unimaginably diverse and amorphous construct" (Bradlee & Emmons, 1992, p. 821), narcissism enjoys a rich and varied etiology that contributes to the ambiguity of its definition and its empirical illusiveness. Beginning with Ellis' (1898/2010) description of "Narcissus-like" behavior to define aberrant, self-absorbed sexual behaviors, and later gaining acceptance as a normal part of ego and libidinal development in Freud's (1914/1991) theory of psychosexual development, the early impressions of narcissism dealt explicitly with sexual behaviors and motivations. The "neo-Freudians" (i.e., Horney, Adler, Fromm, Klein, Erikson), without fully discounting the structure of Freud's psychosexual theory, support a psycho*social* theory of development and contend that narcissism either exists as, enables, or thwarts successive stages of development throughout childhood and into adolescence. Theorists such as Kernberg (1975) and Kohut (1977) suggest that certain interruptions or disconnections in human development contribute proportionally to the narcissistic tendencies in individuals, particularly parental overvaluation or undervaluation. Social learning theorists such as Millon (1981), draw from the works of Kernberg and Kohut to sketch a picture of the narcissist as someone whose enhanced self image "cannot be sustained in the outer world" (p. 165) and, thus, struggles to create an environment and make associations that provide continual validation.

Narcissism first appeared as a personality disorder in the third edition of the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III) in 1980. Listed among the ranks of borderline personality disorders, Narcissistic Personality Disorder (NPD) is diagnosed clinically by use of a taxonomic menu. Individuals exhibiting at least five of the following nine categorical symptoms in extremity are considered candidates for clinical diagnosis of NPD:

1. a grandiose sense of self-importance (e.g., exaggerate achievements and talents, expect to be recognized as superior without commensurate achievements);
2. a preoccupation with fantasies of unlimited success, power, brilliance, beauty, or ideal love;
3. the belief that they are "special" and unique and can only be understood by, or should associate with, other special or high-status people (or institutions);
4. the demand for excessive admiration;
5. the belief in a sense of entitlement (i.e., unreasonable expectations of especially favorable treatment or automatic compliance with his or her expectations);
6. interpersonally exploitative thoughts and behaviors (i.e., take advantage of others to achieve their own ends);
7. a lack of empathy (i.e., are unwilling to recognize or identify with the feelings and needs of others);
8. envy toward others and/or the belief that others are envious of them; and
9. arrogant, haughty behaviors or attitudes.

(American Psychiatric Association, 2000)

According to the most recent publication of the *DSM*, edition IV (American Psychiatric Association, 2000), less than 1% of the general population is clinically diagnosed with narcissism, likely owing to the fact that narcissists, with a heightened sense of grandiosity, would not recognize their own flaws and shortcomings that might lead them to therapy (Campbell, Brunell, & Finkel, 2006; see also Corbitt, 2002; Millon, 1981).

While a categorical system of classification is useful as a clinical diagnostic tool, "only extreme manifestations of those [categorical] behaviors constitute pathological narcissism, and the assumption is that when exhibited in less extreme forms, these behaviors are reflective of narcissism as a personality trait" (Emmons, 1987, p. 12). Trait psychology maintains that "individual differences in most characteristics are continuously distributed"; that is, in a dimensional sense, "normal" and "abnormal" are opposite ends of the same continuum of an individual's personality (Costa & Widiger, 2002, p. 4). While all individuals may have the propensity toward occasional and innocuous narcissistic behaviors, *dispositional narcissists* exhibit the following behaviors and expectations to such a degree as to "limit or weaken social, personal, and professional interactions or to compromise relationships" (Ryan, Sweeder, & Bednar, 2002, p. 26; see also Buss & Chiodo, 1991; Campbell, Bush, Brunell, & Shelton, 2005):

• actively engage in self-enhancement, seeing themselves in an unrealistically positive light

often at the detriment and devaluation of others (Emmons, 1987; Paulhus & Williams, 2002; Raskin, Novacek, & Hogan, 1991; Robins & Beer, 2001);
• possess "elevated levels of exhibitionism" and enact attention-seeking behaviors (Campbell, Rudich, & Sedikides, 2002; Buss & Chiodo, 1991; Raskin & Terry, 1988);
• exhibit impulsivity (Raskin & Terry, 1988; Rose, 2007; Vazire & Funder, 2006);
• maintain self-entitled beliefs (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004; Greenberger, Lessard, Chen, & Farruggia, 2008; Raskin & Terry, 1988; Trzesniewski, Donnellan, & Robins, 2008); and
• seek admiration but not acceptance in that they prefer to "get ahead" rather than "get along" (Paulhus & John, 1998; Raskin et al., 1991; Robins & Beer, 2001).

Developed in 1979 by Robert Raskin and Calvin Hall, the Narcissistic Personality Inventory (NPI) measures narcissistic traits as dimensions of normal personality. Those individuals who score high on the NPI reportedly possess the dispositional criteria of self-enhancement, impulsivity, entitlement, exhibitionism, and social climbing in greater proportion along the continuum of normal personality. While dispositional narcissists may be considered "interpersonal irritants" (Paulhus & Williams, 2002), they are not pathologically disordered in the categorical, clinical sense. This study is concerned with narcissism as a personality construct as measured by the NPI, reflective of dimensional personality traits and individual dispositions.

The Big Five Personality Traits

Considering a dimensional measure of personality suggests that all individuals possess varying degrees and combinations of facets that, when culled, constitute a set of traits, which in turn combine to define an individual's personality. Narcissism can be seen as a distinct personality, the product of a combination of traits that comprise the Big Five. Broadly representing personality trait dimensions, the taxonomic *Big Five* details and defines five comprehensive personality traits: Openness (O), Conscientiousness (C), Extraversion (E), Agreeableness (A), and Neuroticism (N). "Common dimensions of individual difference" are theoretically addressed in terms of "high" and "low" increments of each of the five traits (McCrae & John, 1992, p. 199); the Big Five traits, when viewed as multiple variables that comprise a personality construct, facilitate the definition of particular types or categories of personality (John & Srivastava, 1999). For example, Paulhus and Williams (2002) empirically determined

construct differences among the "Dark Triad of personality," constituted by Machiavellianism, psychopathy, and narcissism. Their findings indicate that individuals classified as "Machiavellian" score low in C and low in A; psychopaths score low in C, low in A, and low in N; narcissists score low in A and high in E. While each of these constructs shares a low A, it is the varying degrees and combinations of the traits that set each of the constructs apart.

Significant to the present study is the empirical and meta-analytic evidence that suggests a relationship between narcissism and the Big Five personality traits of agreeableness and extraversion (Buss & Chiodo, 1991; Paulhus & Williams, 2002; Saulsman & Page, 2004). Agreeableness is defined as an interpersonal trait dimension that "contrasts a prosocial and communal orientation toward others with antagonism" (John & Srivastava, 1999, p. 121). Those who score high in A are more likely to be altruistic, tender-hearted, trusting, empathetic, and modest (Costa & Widiger, 2002). Those who score low in A and who are subsequently termed as disagreeable are more likely to be hostile, indifferent, self-centered, spiteful, and jealous (Digman, 1990). Those who score high on the interpersonal trait dimension of extraversion (E) exhibit sociability, activity, and assertiveness (John & Srivastava, 1999) as well as dominance, competitiveness and frankness (see Digman, 1990; Eysenck, 1978). Those who score low in E are typically classified as Introverts and tend to be more aloof, reserved, and independent (Costa & Widiger, 2002).

Empirical data captured by Paulhus and Williams (2002) and Buss and Chiodo (1991) indicate significant relationships between the Big Five traits of agreeableness and extraversion and the personality construct of narcissism. In each study, narcissism—as measured by the NPI—correlates positively with extraversion and correlates negatively with agreeableness. Further, in their meta-analysis of studies that address the relationships between the *DSM-IV* personality disorders and the dimensions of personality represented by the Big Five, Saulsman and Page (2004) found similar significant correlations across both clinical and non-clinical populations. Parsimoniously stated, within the space of the Big Five, the NPI narcissist is a "disagreeable extravert" (Paulhus, 2001, p. 228). Contributing to this body of empirical evidence, the present study explores the relationships between narcissism, as measured by the NPI, and extraversion (E) and agreeableness (A).

Achievement Goal Orientation

According to Eysenck (1978), an individual's personality, more than his or her IQ, is a significant variable in the learning process. Personality traits can "facilitate or inhibit the effective use of [learning] strategies" by exercising control over those "motivational impulses or the motivational blocks to use or not to use learning strategies and thus improve or turn down performance" (Blickle, 1996, p. 338). Not inconsistent with Eysenck, Dweck (1999, 2008a, 2008b) maintains that individual beliefs or "self-theories" about learning are critical pieces of an individual's personality and intellectual constitution; such beliefs comprise mindsets that influence achievement patterns and trajectories. An individual who possesses a "fixed" mindset believes that her intelligence and other basic qualities are fixed traits; that is, effort and practice will not influence them, as the limits are predetermined. Those of a fixed mindset deem their abilities to be inherently manifested. By contrast, an individual who possesses a "malleable" mindset believes that her intelligence and other basic qualities can be grown and expanded upon through effort and education. She is less concerned with short-term evaluations of her abilities and more focused on their cultivation in the long-term (Dweck, 2004).

The perspective an individual takes when addressing a task in an achievement situation—her *achievement goal orientation*—is determined by her beliefs and self-theories, which constitute her mindset, which is determined by her personality (de Raad & Schouwenburg, 1996; Dweck, 1999, 2008a; Judge & Ilies, 2002; Klein & Lee, 2006; Wolters, Yu, & Pintrich, 1996). Based on their personalities and subsequent mindsets, individuals are disposed to pursue either a learning goal orientation (LGO) or a performance goal orientation (PGO), each of which is suggestive of different prerogatives when approaching a task (Dweck, 1999). Those with a LGO (used synonymously with mastery goal orientation) are focused on the process of mastering or learning material in achievement situations. Individuals with a malleable mindset are most likely to possess a LGO; they harbor an intrinsic motivation to engage in challenging tasks and are willing to "risk displays of ignorance in order to acquire skills and knowledge" (Dweck, 1986, p. 1042). They recognize that their efforts lead to success, and as a result, they find enjoyment in investing effort strictly for the outcome of an increased understanding (Ames, 1992; Dweck, 1986; Wolters, et al., 1996). According to Wolters et al. (1996), "a goal orientation that prioritizes effort and mastery of skill is more likely to include cognitive strategies such as elaboration and organizational strategies, which reflect deeper levels of cognitive processing" (p. 213). The LGO individual utilizes adaptive achievement patterns, "characterized by challenge seeking and high, effective persistence in the face of obstacles" (Dweck, 1986, p. 1040) either to improve her skills and competence (*mastery-approach*) or to avoid losing her skills and becoming incompetent

(*mastery-avoidance*; Finney, Pieper, & Barron, 2004); the LGO individual is unlikely to quit when challenged by new or difficult information.

While LGO embodies adaptive patterns of motivation, which lead to positive cognitive strategies that enable long-term retention of information, PGO is suggestive of more maladaptive patterns (Wolters, 2004), which tend toward cognitive biases, helplessness, or other obstructions that impede processing and support only short-term retention. "Characterized by challenge avoidance and low persistence in the face of difficulty" (Dweck, 1986, p. 1040), individuals with PGO are more concerned with outward demonstrations of their ability and with appearing better than others than with having a truly deep understanding of the material or mastery of a skill (Dweck, 1986; Wolters, et al., 1996). Possessing a fixed mindset, they are motivated by a desire to appear knowledgeable (*performance-approach*) or to avoid looking unknowledgeable (*performance-avoidance*); and it is their prerogative to seek extrinsic validation through performance, such as grades and favorable feedback delivered publicly, for their perceived fixed abilities (Dweck, Mangels, & Good, 2004; Wolters et al., 1996). Those with a fixed mindset become "excessively concerned with how smart they are, seeking tasks that will prove their intelligence and avoiding ones that might not" (Dweck, 2008b, p. 34). In their attempts to avoid unfavorable judgments, individuals with PGO are more likely to utilize defensive cognitive strategies that lead to negative performance outcomes. Among these strategies are Greenwald's (1980) "beneffectance," the inclination to attribute positive outcomes to the self and negative outcomes to situational factors, and Millon's (1981) "Illusion of Competence" wherein individuals

> assume that the presumption of superiority will suffice as its proof. Conditioned to think of themselves as able and admirable, they see little reason to waste the effort needed to acquire these virtues. . . . Rather than face genuine challenges, they may temporize and boast, but they never venture to test their adequacy. . . they can maintain their illusion of superiority without fear of disproof. (p. 177-178)

Empirical studies have demonstrated correlations between achievement goal orientation and the Big Five personality traits (e.g., see Wang & Erdheim, 2007; Zweig & Webster, 2004), noting specific correlations between the personality traits of extraversion and agreeableness and both learning and performance goal orientations. Zweig and Webster (2004) present findings that demonstrate positive correlations between

extraversion and both learning goal orientation and performance-approach orientation. These data suggest that those individuals high in E may be willing to "put themselves out there" and engage in intellectual risks and challenges but that they are extrinsically motivated to do so, desirous of the attention, perceived admiration, and validation they will receive for the attempt alone. Research conducted by Lucas, Diener, Grob, Suh, and Shao (2000) support the finding that extraverts are sensitive to the rewards inherent in most social situations and indicate that while their efforts may suggest a learning goal orientation, the motivation behind the efforts of those with high E are performance-oriented.

Additional data from the Zweig and Webster (2004) study indicate that agreeableness (A) is positively correlated with learning goal orientation and negatively correlated with performance-avoidance orientation. Those individuals who are low A correlate positively with a performance-avoidance orientation, which is consistent with the theoretical picture of the low A individual as competitive, skeptical, and cynical (Wang & Erdheim, 2007; Zweig & Webster, 2004). In sum, these empirical findings suggest that those individuals who are high E and low A, Paulhus' "disagreeable extraverts," are inclined toward performance orientation. The present study contributes to these data by exploring relationships between E, A, and achievement goal orientation.

While the literature suggests a theoretical relationship between dispositional narcissists (as "disagreeable extraverts") and performance goal orientation based on the transitive empirical relationships among narcissism and the Big Five traits of extraversion and agreeableness and among the Big Five traits of extraversion and agreeableness and goal orientation, there are no empirical data to date that confirm this supposition. The current research explores possible relationships between narcissism and goal orientation among college students to address this theoretical relationship and to provide a foundation for further study into student beliefs, self-theories, and personality, which hold significant implications for an individual's cognitive processing and subsequent learning. To this end, this study addresses the following research questions:

1. Is there a relationship between narcissism and the Big Five personality traits of Extraversion and Agreeableness?
2. Is there a relationship between the Big Five personality traits of Extraversion and Agreeableness and achievement goal orientation?
3. Is there a relationship between narcissism and achievement goal orientation?

Methodology

Participants

Participants in this study were 308 undergraduates taken from a convenience sample of 321 students enrolled in three sections of a one-credit college-level professional seminar course in a large university in the eastern United States. The academic level of the participants reflected students at their Sophomore (7%), Junior (50%), and Senior (43%) years; the average age of the participants was 21.7 years. Female students comprised 85% of the study respondents.

As part of their coursework, students were asked to complete an online, Likert-type survey that comprised three distinct measures: the Narcissistic Personality Inventory (NPI), the Big Five Inventory (BFI; John, Donahue, & Kentle, 1991), and the Achievement Goal Questionnaire (AGQ). Students were promised a report of their scores on the BFI component of the survey to assist them in researching career paths that are consistent with their assessed personality strengths (see Barrick & Mount, 1991; Judge, Heller, & Mount, 2002). The participants' personal interest in the resulting data coupled with its perceived usefulness and the substantial course credit they received for the completion of the survey assignment in its entirety contributed to the response rate of 96%.

Measures

The survey instrument is a 96-question (exclusive of demographic questions) electronic survey, comprised of three distinct sections or "inventories," each of which represents different known measures. Each of the three measures—the Narcissistic Personality Inventory, the Big Five Inventory, and the Achievement Goal Questionnaire—is described below.

Narcissistic Personality Inventory (NPI). Regarded as the preeminent self-report instrument for measuring non-clinical populations for dispositional narcissistic traits (Paulhus & Williams, 2002), the NPI demonstrates considerable internal consistency with Cronbach's alphas ranging from .80 to .86 (Emmons, 1987; Raskin & Terry, 1988; Rhodewalt & Morf, 1995). For the present study, the NPI had an internal reliability of .82 ($n = 308$).

The NPI, constructed by Raskin and Hall (1979), contains 40 forced-choice questions, which ask respondents to choose between two statements by selecting the statement with which they most closely identify. Pairs of statements, such as "I am no better or worse than most people" vs. "I think I am a special person" and "I am more capable than other people" vs. "There is a lot that I can learn from other people" are scored according to a key, which awards the more

narcissistic answer with a point. Scores on the NPI may range from 0 (respondent selected no narcissistic statements) to 40 (respondent selected all narcissistic statements); mean scores reported across the empirical literature range from 15.55 to 16.71 (Miller et al., 2009; Raskin & Terry, 1988; Trzesniewski et al., 2008). While the potential exists to do so, the overall scores on the NPI in these findings will be evaluated without factor analysis, as this study aims to establish a fundamental relationship between all measurable aspects of narcissism and the Big Five personality traits and goal orientation.

Big Five Personality Inventory (BFI). The BFI, constructed by John, Donahue, and Kentle (1991), is a 44-item inventory that asks respondents to indicate their level of agreement with self-descriptive statements along a 5-point Likert scale in which 1 = "Disagree Strongly" and 5 = "Agree Strongly." With mean coefficient alphas above .80 (John & Srivastava, 1999), the BFI determines respondent strengths in the Big Five personality traits of Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. Internal consistency coefficients for each of the personality scales within the BFI are as follows (Cronbach's alpha): Openness = .81; Conscientiousness = .82; Extraversion = .88; Agreeableness = .79; Neuroticism = .84 (John & Srivastava, 1999). Cronbach's alpha reliabilities for each scale in the present study are indicated as follows: Openness, .81; Conscientiousness, .79; Extraversion, .87; Agreeableness, .74; and Neuroticism, .80. All alphas were determined at $n = 308$.

Sample statements for which the respondents must rate their agreement include, "I see myself as someone who is original, comes up with new ideas" (Openness); "I see myself as someone who does a thorough job" (Conscientiousness); "I see myself as someone who generates a lot of enthusiasm" (Extraversion); "I see myself as someone who is helpful and unselfish with others" (Agreeableness); and "I see myself as someone who worries a lot" (Neuroticism). After the reverse-scored items are standardized, scores for each personality scale are determined by calculating the mean of the numerical responses to each categorical question. Scores for each scale may range from an average of 1 (indicating low levels of the personality trait) to an average of 5 (indicating high levels of the personality trait).

Achievement Goal Questionnaire (AGQ). Designed by Elliot and McGregor (2001), the original AGQ measures performance (approach and avoidance) and mastery (approach and avoidance) orientation in a course specific context. Generalizing the AGQ to a more domain-specific context (i.e., general academic achievement as opposed to course-specific achievement), Finney, Pieper, and Barron (2004) calculated reliabilities for three of the four goal

orientation variables of over .70: Performance-Approach Orientation = .88; Mastery-Approach = .74; Mastery-Avoidance = .76. The fourth goal orientation, Performance-Avoidance, had a Cronbach's coefficient alpha of .68, which was consistent with that of the Elliot and McGregor instrument, .64. For the present study, Cronbach's alphas for each of the factored scales follow: Performance-Approach Orientation = .87; Mastery-Approach Orientation = .79; Mastery-Avoidance Orientation = .79; and Performance-Avoidance Orientation = .75. All alphas were calculated at n = 308.

Further calculations were undertaken to determine the internal reliability of the synthesis of the factored scales into more general categories of "Overall Performance Orientation" (α = .85, *n* = 308) and "Overall Mastery Orientation" (α = .73, *n* = 308), which will be of use for making conclusions regarding general goal orientation within this study.

The version of the AGQ employed in this study requires that respondents rate the validity of each of 12 statements as they apply to the respondents' attitudes toward learning and performance in their college classes during the semester along a 7-point Likert scale in which 1 = "not at all true of me" and 7 = "very true of me." Scores are calculated by taking the mean among the statement clusters for each of the four goal orientations. Mean scores can range from 1 (indicating no association with the goal orientation) to 7 (indicating a strong association with the goal orientation) for each goal orientation category. Sample statements for which respondents must provide a level of personal validity include: "My goal this semester is to get better grades than most of the other students" (Performance-Approach); "I just want to avoid doing poorly compared to other students this semester" (Performance-Avoidance); "Completely mastering the material in my classes is important to me this semester" (Mastery-Approach); and "I am definitely concerned that I may not learn all I can this semester" (Mastery-Avoidance).

Procedures

Students were introduced to the personality assessment activity first in the course syllabus at the beginning of the semester and again in class, when they were made aware of the availability of the online survey and provided instruction on how to access it. The online survey was available for students to access via the course website. The students were given 10 days to complete the survey. During this 10-day period, students received two reminders via email, which included the web link to the online survey, and one reminder in class, with the web link to the online survey projected on a large screen in the lecture hall. At the

end of the data collection period, the survey was taken offline and was no longer accessible to participants. Data were downloaded from the survey instrument and imported into an Excel file. Individual reports were prepared for the students by calculating their average scores on each of the Big Five personality traits, as per the agreement in the course assignment. This information was returned to the students on an individual basis, and a whole-class lecture was provided that explained the data and how students might use it when choosing their careers. Once the data were sorted and the results were returned to the students, all identifying information (i.e., student names) was removed from the existing dataset. Use of the "clean" dataset was approved by the Institutional Review Board for this study. Statistical software was used to calculate the resulting descriptive data and correlation coefficients.

Results

Using the "clean" dataset, data gathered from the three instruments were calculated according to the protocol for each. An NPI score, mean scores for the BFI scales, mean scores for the AGQ scales (performance-approach, performance-avoidance, mastery-approach, and mastery-avoidance), and mean scores for the non-factorial, general Overall Performance Orientation and Overall Mastery Orientation scales were determined for each respondent. For the purpose of this study, the BFI scales for Openness, Conscientiousness, and Neuroticism will not be discussed, as the data are superfluous to the relationships sought herein. Descriptive statistical data relevant to the current study are summarized in Table 1.

Research Question One

The first research question seeks to determine whether a relationship exists between NPI scores for narcissism and BFI scores for the Big Five personality traits of extraversion (E) and agreeableness (A). To determine the existence of a relationship, a bivariate analysis using Pearson's *r* was performed on the NPI scores and the mean scores for the BFI subscales for E and A. The findings are suggestive of a statistically significant relationship between narcissism and E and A; narcissism as measured by the NPI has a positive correlation with extraversion (r = .473, p < .01) and a negative correlation with agreeableness (r = -.187, p < .01; see Table 2).

Research Question Two

The second research question seeks to determine whether a relationship exists between the BFI scores for extraversion (E) and agreeableness (A) and the AGQ scores for performance (approach and avoidance) and

Table 1
Summary of Mean Scores and Standard Deviations for NPI, BFI, and AGQ Scales

Scale	M	SD
Narcissism	16.14	6.29
Extraversion	3.52	.81
Agreeableness	3.99	.54
Mastery-Approach Orientation	5.26	1.22
Mastery-Avoidance Orientation	3.86	1.43
Overall Mastery Orientation	4.56	1.03
Performance-Approach Orientation	4.89	1.47
Performance-Avoidance Orientation	4.28	1.49
Overall Performance Orientation	4.58	1.31

Table 2
Correlations for Narcissism, Extraversion, and Agreeableness

Scale	1	2	3
1. Narcissism	---	.473**	-.187**
2. Extraversion	.473**	---	.023
3. Agreeableness	-.187**	.023	---

Note. ** p < .01, two-tailed.

mastery (approach and avoidance) goal orientations. A bivariate analysis using Pearson's *r* was performed on the mean scores for the BFI subscales for E and A and on the mean scores on the AGQ subscales for performance-approach, performance-avoidance, mastery-approach, and mastery avoidance. Additionally, correlation analyses were computed to determine the relationships between E, A, and overall mastery orientation and the relationships between E, A, and overall performance orientation. The findings suggest that there is a positive relationship between overall mastery orientation and agreeableness (*r* = .200, *p* < .01) as well as a positive relationship between mastery-approach orientation and agreeableness (*r* = .273, *p*<.01). Further, the data indicate a negative relationship between mastery-avoidance orientation and extraversion (*r* = -.124, *p* < .05). As indicated in Table 3, the data revealed no statistically significant relationships between extraversion, agreeableness, and the domains of performance orientation (avoidance, approach, or overall).

Research Question Three

The third research question seeks to determine whether a relationship exists between NPI scores and the AGQ scores for performance (approach, avoidance, and overall) and mastery (approach, avoidance, and overall) goal orientation. A bivariate analysis using Pearson's *r* was performed on the NPI scores and the

mean scores on the AGQ subscales for mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance, as well as for the overall mastery and performance scales. The data indicate a negative correlation between narcissism scores and mastery-avoidance goal orientation (*r* = -.118, *p* < .01) and a positive correlation between narcissism scores and performance-approach goal orientation (*r* = .197, *p* < .01), as well as a positive correlation between narcissism scores and overall performance goal orientation (*r* = .143, *p* < .05; see Table 4).

Discussion

This exploratory study seeks to determine the relationship between narcissism and goal orientation among university undergraduates. Fundamentally, relationships were determined between the Big Five traits of extraversion and agreeableness and the construct of dispositional narcissism. Effect size estimates, calculated by squaring the correlations reported in Table 4 (see Wilkinson & the Task Force on Statistical Inference, 1999), indicate that extraversion accounts for 22.4% of the variance in narcissism, while agreeableness accounts for 3.5% among the population in this study. These findings are consistent in their practical significance with previous studies conducted by Buss and Chiodo (1991), Paulhus and Williams (2002), and Saulsman and Page (2004) and further confirm that the construct of dispositional narcissism is

Table 3
Correlations Among Extraversion, Agreeableness, and Mastery Orientation

Scale	1	2	3	4	5
1. Extraversion	---	.023	-.124*	.103	-.025
2. Agreeableness	.023	---	.056	.273**	.200**
3. Mastery-Avoidance Orientation	-.124*	.056	---	.212**	.817**
4. Mastery-Approach Orientation	.103	.273**	.212**	---	.736**
5. Overall Mastery Orientation	-.025	.200**	.817**	.736**	---

Note. * p < .05, two-tailed. ** p < .01, two-tailed.

Table 4
Correlations between Narcissism and AGQ Scales

Scale	1	2	3	4	5	6	7
1. Narcissism	---	-.118*	.062	-.045	.056	.197**	.143*
2. Mastery-Avoidance Orientation	-.118*	---	.212**	.817**	.216**	.117*	.189**
3. Mastery-Approach Orientation	.062	.212**	---	.736**	.080	.261**	.193**
4. Overall Mastery Orientation	-.045	.817**	.736**	---	.197**	.235**	.244**
5. Performance-Avoidance Orientation	.056	.216**	.080	.197**	---	.562**	.885**
6. Performance-Approach Orientation	.197**	.117*	.261**	.235**	.562**	---	.882**
7. Overall Performance Orientation	.143*	.189**	.193**	.244**	.885**	.882**	---

Note. * p < .05, two-tailed. ** p < .01, two-tailed.

comprised of disproportionate levels of E (high) and A (low).

Positive correlations were found between the personality trait of agreeableness and overall mastery goal orientation, and, more granularly, between agreeableness and mastery-approach goal orientation. Theoretically speaking, those who score high in agreeableness are more inclined toward a mastery goal orientation. That is, those whose personality tendencies tend toward empathy, cooperation, trust, and modesty (Costa & Widiger, 2002) are found to be more intrinsically motivated and find enjoyment through efforts they exert in the completion of tasks or in problem-solving. Possessing a proclivity toward mastery-approach orientation, these individuals will not shy away from challenging situations, and their desire to tackle challenges is greater than their fear of appearing unknowledgeable in front of others. In other words, they *approach* challenges with the full intent of *mastering* them. Based on the empirical data and considering the practical significance of the findings, the estimated effect sizes for the correlations determined in this study suggest that agreeableness

accounts for 7.5% of the variance in mastery-approach goal orientation and only 4% of the variance in overall mastery goal orientation. While the personality trait of agreeableness does indeed enjoy a relationship with an individual's achievement goal orientation, it accounts for a small portion of that orientation.

While generally consistent with the findings from the Zweig and Webster (2004) study, data in the present study reveal an inconsistency: no significant relationship was found between agreeableness and performance-avoidance orientation. It is reasonable to conclude that the disparity among the findings is due in part to the differences in instruments and populations.

Considering the trait features of individuals who score high in extraversion—those whose personalities lead them to be social, assertive, dominant, and competitive (Costa & Widiger, 2002; Digman, 1990)—it would seem appropriate to ascribe them to a performance orientation. Contrary to this theoretical assumption, however, the present study found no significant correlation between extraversion and performance goal orientation. While there does appear to be a negative correlation between extraversion and

mastery-avoidance orientation, effect size estimates in the present study suggest that extraversion accounts for only about 1.5% of the variance in mastery-avoidance orientation. As indicated by Finney et al. (2004), individuals who do have a mastery-avoidance orientation are likely to focus on "avoiding negative possibilities such as losing skills or becoming incompetent" and "strive to avoid misunderstanding the course material or to not forget what [they have] learned" (p. 367). Further, those with a mastery-avoidance goal orientation are inclined toward perfectionism and will take great pains "to avoid making mistakes or doing anything wrong" (Finney et al., 2004, p. 367). Given the negative correlation between extraversion and mastery-avoidance orientation, the data suggest that extraverts are, to a small degree, not so inclined to worry about becoming incompetent, forgetting what they've learned, or making mistakes. Additional research is needed to determine whether those who score low in extraversion (i.e., introverts) have a greater orientation toward mastery-avoidance.

Because of their propensity toward self-enhancement, their attention-seeking behaviors, their desire for admiration, and their impulsivity and self-entitledness, it would be natural to assume in an anecdotal sense that those predisposed to narcissism would favor a performance goal orientation. According to Dweck (2008b), those individuals with a performance goal orientation come from a fixed mindset wherein they "care first and foremost about how they'll be judged: smart or not smart" (p. 35). This priority would suggest that there are significant potential impediments for dispositional narcissists in learning environments; the need for recognition and public validation drives their efforts in the classroom, and they are less inclined to take risks and make errors for fear of appearing less than stellar in the eyes of their peers and instructors.

Those individuals with performance-approach orientation "want to demonstrate their ability relative to others or want to prove their self-worth publicly" (Wolters, 2004, p. 236), and as a result will play it safe by taking the easier, well-worn path, intellectually speaking; they wish to exhibit only what they know for certain. They will resort to cheating if their ability is questioned, as the need to exert effort "makes them feel dumb" (Dweck, 2008b, p. 35). Because narcissists enjoy the attention of performance (Campbell et al., 2002) and because they fear failure and rejection (Elliot & Thrash, 2001), the theoretical assumption suggests that their performances are often representative of superficial artifacts as opposed to deep processes of engaged learning that come with a mastery or learning goal orientation. The findings in this study, while not entirely discounting the role of narcissism in

achievement goal orientation, suggest that there is much more to determining the achievement goal orientation of a learner than his or her narcissistic disposition. While we may find the narcissistic student to be, in Paulhus and Williams' (2002) estimation, an "interpersonal irritant," the data in this study suggest that narcissism is not a significant factor in determining a student's achievement goal orientation; however, regardless of the small percentages, narcissism does share more of a relationship with performance goal orientation than with mastery goal orientation, accounting for 3.9% of the variance in performance-approach orientation and 2% of the variance for overall performance orientation. Although negatively correlated with mastery-avoidance orientation, narcissism accounts for only 1.4% of the variance in that realm, while accounting for virtually none (0.2%) of the variance in overall mastery orientation.

Limitations

Like all research that uses self-report measures, the results of this study may have been affected by common methods bias including social desirability bias and consistency motif. Social desirability bias occurs when the respondents tend "to present themselves in a favorable light, regardless of their true feelings about an issue or topic" (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 881). A social desirability bias coupled with a consistency motif, in which respondents "try to maintain consistency in their responses to similar questions or to organize information in consistent ways" (Podsakoff et al., 2003, p. 881), may offer some explanation as to why some of the findings in this study are inconsistent with those in previous research.

Because their identities were initially provided and linked to the results of the BFI measure for the classroom assignment, respondents may have been more susceptible to a social desirability bias. Wanting to appear more socially acceptable and attractive, respondents may have opted for the more favorable responses and maintained a consistent set of responses for similar questions throughout the survey. These biases together have the potential to act as "suppressor variables" that hide the actual relationships between variables or "moderator variables" that influence the relationships between variables (Podsakoff et al., 2003, p. 881), which may have impacted the strength of statistical significance among the variables in this study.

Future iterations of this study will take additional steps to account for common methods bias including the temporal separation of the various instruments, asking respondents to complete the NPI, the BFI, and the AGQ questionnaires as discrete entities at different

times. Psychological separation of the instruments is also a potential remedy for consistency motif biases, wherein each questionnaire has its own "cover story" to make it appear unique and unrelated to the other instruments (Podsakoff et al., 2003). In addition to these methodological considerations to account for common methods bias, treatments of the relationship between narcissism and achievement goal orientation should include a qualitative component that would allow researchers to augment the quantitative findings with explanatory narratives. Such a component might include observations, interviews with the participants, and interviews with those who know the participants and their personality traits and behavioral tendencies.

Conclusion

Because this study functions as an exploratory foundation to include the construct of narcissism as a potential variable in students' learning, it serves to contribute to the ongoing investigation into the relationships between personality and cognition. Future studies should consider the contextual nature of achievement goal orientation and, perhaps, the contextual and/or developmental nature of the narcissistic disposition itself. Additional empirical investigations into narcissism and learning should further explore the relationship between Dweck's self-theories, which capture mindsets and achievement goal proclivities, and the disposition of narcissism within specific learning environments.

If the statistical trends identified by Jean Twenge and her colleagues (2008) indeed suggest an increase in narcissism (vis-à-vis NPI scores) among university undergraduates across the U.S., then exploring the implications of such a shift in personality in the realm of teaching and learning is certainly worthwhile. The appeal to label, categorize, and distinguish learners as "this type" or "that style" is indeed seductive in its simplicity; however, as reflective educators, we know that the enigmatic challenges of teaching are too easily remedied by such categorization. We recognize that pigeonholing a single individual—let alone an entire generation—is a dangerous enterprise, leading to unfortunate self-fulfilling prophecies and gross over- and under-estimations that can impede and/or damage the learning process. As narcissism continues to make headlines and to be featured prominently in discussions of "what's wrong with kids these days" (e.g., see CBS News Staff, 2010; Clark, 2010; Twenge, 2012), it is wise to explore the true nature of this "epidemic" (Twenge & Campbell, 2009) to determine its catalytic power in our classrooms and in the learning process.

In light of Pintrich's (1994) suggestion that the goal of educational research is not only to better understand the constructs of learning, thinking, and

motivation, but also "actually to improve learning" (p. 141), this study seeks to contribute to these efforts by exploring possible connections between a student's personality construct and his or her achievement goal orientation. In order to help students become better, deeper learners, educators must continue to investigate those myriad variables that constitute their cognitive behaviors—both those that are adaptive and those that are maladaptive—and develop teaching strategies that enhance learning strategies (Wolters, 2004). This is not to say that best instructional practices should cater to specific learning preferences. On the contrary, Pashler, MacDaniel, Rohrer, and Bjork (2009) admonished that "research needs to be the foundation for upgrading teaching and learning" and that "its primary focus should be on the experiences, activities, and challenges that enhance *everybody's learning* [emphasis added]" (p. 117). While the findings of this study do suggest a slight indication toward a particular task orientation, they in no way definitively define narcissistic individuals as consistently performance oriented; therefore, it would be quite a mistake to design instruction that appeals to such an orientation, which is little more than a *preference* masquerading as a true cognitive *necessity*.

Empirical explorations of the relationships between student personality constructs and learning add to the growing body of "best practice" discourse by contributing to the creation of a heuristic through which educators may develop proactive, interventive instructional models and pedagogies. Central to these models and pedagogies is a prioritization for individual difference, which values the synthesis of personal experience with new information, and high standards for mastery achievement, which encourages all students to improve their learning by engaging in reflective strategies that lead to deeper cognitive processing and a greater metacognitive awareness (de Raad & Schouwenburg, 1996; Somuncuoglu & Yildirim, 1999).

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Interdisciplinary School Leadership Development for Pre-Service Graduate Students

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Schools need leaders who are prepared to address the complex challenges of the current educational landscape. Questions remain, however, as to the best way to support the development of leaders across disciplines. As graduate educators training new principals, school psychologists and school counselors, a strength afforded is the opportunity to explore the value of shared leadership at the pre-service level. This paper presents a piloted model of interdisciplinary training of graduate students in education to be leaders and change agents committed to culturally responsive positive outcomes in addressing challenging student behavior. The roles and functions of each specific discipline were explored, frames of viewing discipline unpacked and skill development in communicating around emotionally challenging topics provided.

Fullan (2001) differentiates between information and knowledge. He suggests that information is that found on paper and in computers, while knowledge is in people. As a graduate department producing new principals, school psychologists and school counselors we believe that our strength is in supporting the development of individuals who will utilize their ongoing and reflective quest for knowledge within their communities of practice to enable positive change in schools. This paper presents a model of interdisciplinary training of pre-service graduate students with the underlying core objective of preparing leaders and change agents committed to culturally responsive, effective school based practice.

Leithwood and Riehl (2005) suggest that the key functions of leadership can be found in two areas: providing direction and exerting influence. As graduate educators committed to producing leaders in our respective fields, the question emerges as to how to best support the development of leaders to assist in their ability to provide direction and influence. In regard to the former, effective communication is essential to leading change. Pre-service professionals are often trained within their own discipline and thus become well versed in communicating with those with like knowledge, skills and perspective. However, in schools, effective cross-disciplinary communication is challenging, and can be laced with apprehension. Barth (2002) reminds us that a critical and difficult undertaking for all school leaders invested in changing a culture is acknowledging and addressing what he describes as non-discussables:

> [S]ubjects sufficiently important that they are talked about frequently but are so laden with anxiety and fearfulness that these conversations take place only in the parking lot, the rest rooms, the playground, the car pool, or the dinner table at home." (p. 6)

Patterson, Grenny, McMillan, Switzler, and Covey (2002) describe addressing these leadership issues as "crucial conversations," those conversations that occur when stakes are high, opinions vary and strong emotions are present. Knowing how and when to engage in crucial conversations is important in educational leadership, school psychology and school counseling. Shared educational expectations and graduate student collaboration centered on using crucial conversations in the school system to influence positive change provides practical application of this essential skill.

Inter-disciplinary collaboration is another important avenue to model best practice reflective of school-based practice. Most schools practice site based decision making reliant on input from various professionals in the school. Interdisciplinary teams are needed in order for the education not to be fragmented. A greater understanding of other professions increases the likelihood of most effectively utilizing collaborative partnerships and providing more comprehensive supports for students and families (Winitzky, Sheridan, Crow, Welch, & Kennedy, 1995). Professional standards for training and practice serve to provide a discipline with criteria for training and best practice. They define the knowledge-base and skill-sets of professionals in a given field. Knowledge of how the professional roles, expectations and standards are similar and unique across disciplines can help pre-service training programs formulate classes and support field experiences that utilize interdisciplinary collaboration.

Successful school based practice relies on collaboration. As schools are diverse and ever changing systems, cooperation, communication and collaboration are essential to the system's growth and viability. It has been suggested that in such systems, true leadership can be measured by one's ability to have influence (Maxwell, 2005). Reflection on the development of the leadership capacity to influence suggests that all our students could benefit at the pre-service level from collaboration with other school based professionals who would play various leadership roles in the schools. In

order to do so, a pilot project was developed. An underlying assumption grounding the project is that school culture is, in part, comprised of the beliefs shared by education professionals, including principals, school counselors and school psychologists. This project examines beliefs of pre-service graduate students in School Counseling, Educational Leadership and School Psychology regarding the roles and functions of each specific discipline in addressing challenging student behavior. This process utilized "crucial conservations" (Patterson et al., 2002) to unpack underlying assumptions of school discipline systems and their responsiveness to students with different emotional and behavioral needs. The impact of interdisciplinary collaboration on graduate student development was examined through theoretical discussion, experiential learning and case based training.

Development of the Course

The importance of interdisciplinary collaboration was a topic often discussed within our department which consists of three programs, Educational Leadership, Counseling (including Agency and School Counseling) and School Psychology. Indeed our departmental mission statement includes the following:

> [T]he mission . . . is to prepare students who positively impact the lives of and opportunities for individuals, families, schools and communities. Through interdisciplinary collaboration, community partnerships and excellence in teaching and scholarship, the . . . faculty foster the development of reflective practitioners. (Department of Counseling, Educational Leadership and School Psychology, RIC, 2010)

The commitment to interdisciplinary collaboration was strengthened by conversations that impressed upon the faculty the presence of many cross-disciplinary similarities. These similarities included what was being taught, skills needed to be successful in the schools, values instilled in the education professionals and needs of our graduate students. The interdisciplinary collaboration began quite informally, with collegial conversations becoming more targeted. This led to visits to each other's classes and beginning research collaboration. The question remained how to more formally enact our commitment to interdisciplinary collaboration within our department.

In Spring 2010, an interdisciplinary course experience for practicum level students in School Counseling, School Psychology and Education Leadership was developed. This course, Interdisciplinary School Leadership Development,

examined the roles and functions of each specific discipline in addressing challenging student behavior. Applying the underlying assumption that school culture is comprised of shared beliefs to school discipline systems, we hypothesized that we could impact responsiveness to students with different emotional and behavioral needs by enhancing the skill development of interdisciplinary players. In this way we intend for aspiring school professionals to mitigate potential negative outcomes for these vulnerable students by challenging the assumptions that in turn shape the culture. This goal is consistent with our departmental mission, while addressing a topic of high interest and essential skill-based need for our students across disciplines.

The impact of interdisciplinary collaboration on graduate student development was examined through theoretical discussion, experiential learning, and case-based training. The text, *Lost at School: Why Our Kids with Behavioral Challenges are Falling Through the Cracks and How We Can Help Them* (Greene, 2008), was used to explain how the Collaborative Problem Solving Approach reestablishes learning opportunities for, arguably, the students most vulnerable students to failure in school, those with significant emotional and behavioral concerns. The text *Crucial Conversations: Tools for Talking when the Stakes are High* (Patterson et al., 2002) was used to provide a skill-building framework for enhancing communication around difficult, emotionally charged topics.

The course consisted of three seminar sessions that students across the three disciplines attended together. Session 1 covered the topics of Introduction to Leadership Styles and Increasing Knowledge Across Disciplines (including Educational Leadership, School Counseling and School Psychology). The content was framed around the following questions:

- How does self-knowledge of professional identity impact responsibilities and perceived role in the field?
- How does enhanced understanding of the roles and responsibilities of other educational disciplines impact own functioning and potential collaboration?

The premise explored was that effective shared leadership is promoted by increasing knowledge and understanding across professional educational roles.

The second session utilized Greene's (2008) text. The content included an introduction to Collaborative Problem Solving (CPS) and exploration of how it would impact their school setting. Framing questions included:

- How does taking a developmental perspective shift understanding of behavioral concerns?

- How does viewing behavior problems as skill deficits impact disciplinary process?
- How do both of the above change one's view of the child or adolescent?

This session exposed students to a process used to address challenging behavior through a frame that considers the child's development and skills in managing stressful situations in school. The impact of one's view of challenging behavior and theory of discipline on decision making in the schools as well as on school culture was explored.

The third session used the process of Crucial Conversations (Patterson et al., 2002) to complete a case based group experience. The case was a hypothetical meeting regarding a student with discipline referral with various roles assigned within the group (i.e., caregiver, principal, school counselor, school psychologist). Questions addressed in the case discussion included:

- How will varying perspectives of student discipline be discussed within school context?
- How can school professionals advocate for alternate ways of responding to kids who lack the skills to manage successfully in school?

During this third session, students enacted crucial conversation during the hypothetical meeting, articulated their process and reflected on shared pool of meaning created. The roles throughout the process and outcomes varied by group but served well to demonstrate how enhanced communication skills can facilitate culture change by unpacking underlying assumptions and beliefs held by school professionals.

Outcomes

The course served to engage dialogue around the concept of shared leadership in the schools. At the pre-service graduate level, there is interest and motivation to participate in cross-disciplinary training. Student feedback was very positive in terms of the opportunity to learn more about other school based professional training, roles and perspectives. There was also positive response in terms of understanding and empathizing with how roles impact perspectives in problem solving. Students also reported appreciating the opportunity to build relationships with graduate students outside their discipline and network in terms of placements for training and future employment.

Feedback from the students supported that there was a high level of buy in for Greene's (2008) Collaborative Problem Solving model. There was expressed desire for additional training in this area. The majority of students endorsed advocating for a shift in

how schools view discipline and how reactive responses to challenging behavior are in many school settings. There was a strong recognition of need for teachers to be included in this "conversation". There was an expressed desire to include teachers in this pre-service graduate training experience.

Another important outcome was the perception that increased understanding of roles raised awareness of potential contributions in service of overlapping interest (particularly in area of discipline). That is to say, with increased knowledge, students began conceptualizing how others in their school community could be utilized in various situations. It opened up creative thinking in terms of using personnel to their fullest potential. Many students commented that they were surprised by the range of competencies the various professionals could offer.

Implications

To more fully understand the conceptual foundations of this project it is necessary to examine the intellectual foundations of the disciplines from which the participants come. Although distinct, each of the disciplines represented in this project shared significant overlap with the others in terms of core mission as defined and represented in the professional standards. A closer look reveals that, in fact, areas of shared concern outweigh those that are proprietary to any specific profession. Indeed, we found that this did not serve to diminish the unique contributions of educational professionals from each of these disciplines. Rather, by promoting shared understanding of the training, perspective, and potential for collaboration among these graduate student groups, there was the opportunity for better understanding of their own role as well as how it fits within the broader school community. We believe this can prepare them upon graduation to enter into their respective professions with an understanding of shared leadership practices that build upon a common core and also leverage the unique capacities and potential contributions of each member.

To illustrate this, we offer an overview and crosswalk of the professional standards to which school principals, school psychologists and school counselors align their practice. The principal is the school leader who is held accountable for the overall performance of the institution. While each profession represented in the school building is accountable for their own area of professional practice, it is reasonable to expect that their work be linked to the outcomes associated with overall school performance. The professional standards for school principals as described by the Interstate School Leaders Licensure Consortium (ISLLC) suggest there are six core areas of focus for school leaders.

These include mission and vision, teaching and learning, management of the learning environment, external collaborations and partnerships, ethics and integrity, and understanding of the greater context (ISLLC, 2008). It is instructive to note that the evolution of these leadership standards in practice has evolved from "administrative leaders will . . . ", to "educational leaders will . . . ", thus denoting a shift to distributed leadership influenced by the nominal school head. Within this framework we may examine work identifying the commonalities and unique competencies among school psychologists and school counselors in terms of professional standards. Dowd-Eagle, Darcy, & Eagle (2010) note that each of these professions shares the compatible foundation areas of human development, enhancing student learning, design, implementation, and evaluation of school-based programs, programming for academic, personal/social, and behavioral health development, and home-school partnerships. More specifically, the National Association of School Psychology (NASP) professional standards include the following ten domains: (1) data-based decision making and accountability; (2) consultation and collaboration; (3) interventions and instructional support to develop academic skills; (4) interventions and mental health services to develop social and life skills; (5) school-wide practices to promote learning; (6) preventive and responsive services; (7) family-school collaboration services; (8) diversity in development and learning; (9) research and program evaluation; (10) legal, ethical, and professional practice (NASP, 2010). Turning to the American School Counselor Association (ASCA) National Model we see a model of professional practice bounded by the themes, skills, and attitudes of leadership, advocacy, collaboration and teaming, and systemic change all in the service of promoting the academic, career, and personal/social development of all students (Darcy, Dukes, Squier, & Greco, 2010). As demonstrated in Table 1, these common foundation areas align and overlap significantly with the ISLLC standards outlined above. What's more, the professions of both school counseling and school psychology have clearly delineated codes of ethics and expectations for professionalism and integrity in practice. The resulting picture reveals school-based professionals from disparate disciplines who share much in common in terms of core ideals and professional mission.

While commonalities enhance collaboration, also valuable are the contributions that are made based upon the expertise developed through specialized training within each discipline. For example, school psychology graduate students receive specialized training in assessment of academic, social, emotional and behavioral functioning at the individual, classroom and school wide level. School psychologists often work closely with students who are served in special education to ensure access to a full range of educational experiences. School counselors have both developmental and clinical expertise that is applied in their work with individual students, small groups, and via classroom guidance activities. They are also uniquely prepared to attend to system-wide program development utilizing skills associated with consultation, collaboration, and advocacy practices in the service of helping all students to develop and achieve academically. Principals, no longer viewed as mere building managers, articulate a moral purpose, oversee curriculum and instruction, attend to the position of the school in relation to external demands and constituents, and facilitate shared leadership. As such, each has unique contributions to make to interdisciplinary, collaborative leadership teams dedicated to promoting and enhancing the academic success of all students.

Specific to the issue of school discipline, the unique contributions of students from each represented program were also evident. For example, in the final session role-play aspiring principals contributed logistical and policy-level perspectives. School psychology students were able to highlight the interpretation of behavioral evidence from a strengths-based perspective. Finally, aspiring school counselors displayed advocacy and collaboration skills while attending to the diverse needs of meeting participants. This is not to say that each participant is limited by their prescribed roles, rather the role and competency emerged by profession and enhanced the shared pool of meaning.

Benefits to Graduate Students

This project was born of the belief that as graduate educators it is incumbent upon us to fully prepare our students for the roles they will assume upon program completion. If we expect our graduates to actively participate in school leadership within the parameters of their expertise, then it is logical to provide pre-service learning experiences designed to prepare them for that role. This seminar began with facilitating shared understanding of the professional standards, roles and functions of the pre-service professionals represented in the authors' academic department. Through focused activities centered on a common area of interest and practice, namely, school discipline, graduate students were afforded the opportunity to collaborate in a case study scenario with the goal of enhancing understanding and appreciation of one another's approach and potential contributions to practical areas of concern. It is anticipated that the inclusion of this kind of activity at the level of graduate preparation will enhance the speed and effectiveness with which our

Table 1
Professional Standards Crosswalk

Focus Area	ISLLC Standard	NASP Standard	ASCA Standard
Mission & Vision	1. Setting a widely shared vision for learning	2.5 School-wide practices to promote learning	**Standard 2** The professional school counselor advocates for equitable opportunities for every student.
Teaching & Learning	2. Developing a school culture and instructional program conducive to student learning and staff professional growth	2.1 Data-based decision making and accountability 2.2 Consultation and collaboration 2.3 Interventions and instructional support to develop academic skills	**Standard 1** The professional school counselor promotes the academic, career, and personal/social development of every student.
Management of the Learning Environment	3. Ensuring effective management of the organization, operation, and resources for a safe, efficient, and effective learning environment	2.4 Interventions and mental health services to develop social and life skills 2.6 Preventive and responsive services	**Standard 3** The professional school counselor assumes a leadership role within the school community.
External Collaborations and Partnerships	4. Collaborating with faculty and community members, responding to diverse community interests and needs, and mobilizing community resources	2.7 Family-school collaboration services 2.9 Research and program evaluation	**Standard 4** The professional school counselor collaborates to support the success of all students
Ethics & Integrity	5. Acting with integrity, fairness, and in an ethical manner	2.10 Legal, ethical, and professional practice	ASCA Code of Ethics
Understanding the Greater Context	6. Understanding, responding to, and influencing the political, social, legal, and cultural context	2.8 Diversity in development and learning	

graduates will be able to join and participate on interdisciplinary school leadership teams.

Future Directions

This pilot represents an initial effort to incorporate practical, interdisciplinary training at the pre-service level for aspiring education professionals. Next steps include curriculum refinements based on student feedback and instructor observations. Formal evaluation of student outcomes following participation in the Interdisciplinary School Leadership Development Seminar in the coming academic year is also planned. The expectation is that this seminar will become an integral component of each of the three graduate programs currently participating. In addition, exploratory conversations have begun with departmental representatives from other potentially viable participants in the seminar. These include, not surprisingly, faculty members in the areas of teacher preparation and special education. In time, it may be that within the seminar we are able to incorporate a full replication of the kind of interdisciplinary collaboration to which we exhort our graduate students when they leave our programs. In doing so we are able to model our mission for our students and build needed skills desired across disciplines, while reaping the benefits of interdisciplinary sharing.

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The Other Side of the Coin: A Self-Study of Graduate Student Exposure to International Experiences of Inclusion

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This article presents a retrospective understanding of self-study by re-living a study abroad experience through critical reflection. It will explain and clarify how reflection and self-study of the personal experiences of a graduate student can enhance the meaning of inclusion. This paper begins with a brief conceptualization of self-study, introduces the details of an international study abroad experience, and then systematically explores three distinct phases in the reflective process. The aim is to clarify and explain the value and importance of self-study for graduate students by demonstrating its application. While one side of the coin represents those educators who encourage the reflection process, the other side of the coin represents those students experiencing self-study.

Educators often seek innovative teaching methods to foster learning. With graduate student instruction, it often is a coin toss with respect to how to deeply enhance their professional knowledge, skills and dispositions. Reflection is a vehicle to encourage an understanding of self-study. This article will demonstrate the value of self-study by exploring its application through a particular graduate student experience. Detailed reflections in the form of specialized course assignments: a philosophy of inclusion, reflective journals and a culminating task are analyzed. Self-study applicability for graduate students' growth as scholars and professionals in the field of disability studies in education are then formulated. Accordingly, it is necessary to conceptualize a framework of self-study.

Self-Study

Self-study can be conceptualized as an emerging field of inquiry that encourages reflection on powerful experiences that influence professional development. Its origins are in a special interest group founded in 1993 entitled, The Self-Study of Teacher Education Practices Special Interest Group (Bullough & Pinnegar, 2001; Hamilton & Pinnegar, 1998). This special interest group has developed self-study into an innovative method of inquiry that is highly qualitative in nature, dynamic, interactive and derived mainly from post-modern theory (Bullough & Pinnegar, 2001; Hamilton & Pinnegar, 1998; LaBoskey, 2004). The aim of self-study is to further understand a deeply personal engagement with a practical experience that leads to and fosters change in knowledge and a way of being in the world (Bullough & Pinnegar, 2001; LaBoskey, 2004). It is mainly based on self-reflection and it is influenced by a collaborative effort among colleagues and the interrogation of knowledge that occurs amongst them (LaBoskey, 2004). This integration results in negotiations about knowledge, roles and relationships

within an academic context (Bullough & Pinnegar, 2001). Overall, it is about being heard that these personal experiences are shared to foster growth in others (Zeichner, 1998, as cited in Bullough & Pinnegar, 2001). Self-study is a reflection on personal events that are grounded in public history and policy (Mills, 1959, as cited in Bullough & Pinnegar, 2001). This conceptualization emerges from an exploration of texts, research and documents driven by self-study. As a form of professional development, self-study in education is focused specifically on the multi-directional relationship between teachers, educators and students (Bullough & Pinnegar, 2001, as cited in LaBoskey, 2004; Kitchen, Parker, & Gallagher, 2008; Samaras, Hicks, & Berger, 2004). It is situated in action research in the field of education (Bullough & Pinnegar, 2001; LaBoskey, 2004). Over the course of the past decade and a half, self-study's application and presence in programs outside of education appears to be sparse. Despite its scarcity, it has the potential to benefit even the most inexperienced students of education, and can offer much depth and understanding to graduate student experiences.

An integral aspect of the self-study process includes reflective practices. How else are students to bridge the gap between the practical experiences they engage in and the theoretical underpinnings that reform their previous ways of thinking (Schön, 1987)? Encouragement and a strategic educational push are often necessary to come to an understanding of these experiences because they do not present themselves systematically (Schön, 1987). Reflection is heavily influenced by collaborative voice. Schön (1987) captures the essence and importance of inclusion in reflection when he states: "Those who hold conflicting frames pay attention to different facts and make different sense of the facts they notice" (p. 5). Essentially, as participants in any educational field we all have the potential to offer something diverse and that is what makes us a cohesive whole. It was here, in

this virtual world, knowing this valuable piece of information that encouraged my unforgettable journey abroad.

The Emergence of Self-Study: Learning Abroad in Belgium

I am an advocate of inclusive practices in education – those practices that provide the same opportunities to all individuals. As an Applied Disability Studies graduate student with a background in Physical Education, I believe strongly in the notion that educators live amongst everyone. I believe in the value that everyone offers something that another individual can learn. There are both formal educators who teach in classrooms and informal educators whose students are those who happen to cross their informal educational paths. My background studying Physical Education has largely been focused on the physical body. More recently in my graduate work, I have identified the value of an educational thread running through my inclusive practices. At a pivotal moment when I was seeking direction in my graduate education and to challenge the current perspectives I held, I was offered an opportunity to embark on a trip across the world to Ghent, Belgium. I was honored to have been chosen along side with four colleagues to work collaboratively and interrogate our positions on Disability Studies in Education.

Preparation for the Coin Toss

Prior to departure I participated in a graduate seminar facilitated by Dr. Tiffany Gallagher and Dr. Sheila Bennett in the Faculty of Education, Brock University. The diversity amongst the five graduate candidates was staggering. We held distinct perspectives on higher education, physical education, child and youth studies, disability studies, and history. What better place to start facilitating inclusive practices than amongst a group of idiosyncratic graduate students? During these specialized weekly discussions, I was able to explore issues of disability rights, inclusion, and diversity. Although I was unaware of it at the time, my professors were already laying the foundation from which self-study would emerge. The educational framework of self-study was made implicit and strategically embedded in the experience based on the structure of the program. The first step in our self-study experience was to acknowledge a theoretical framework. I was encouraged to reflect on my current ideological position on inclusion. The objective of this first exposure to the realities of my current position was to:

> . . . complete a description of your philosophy on what you think inclusion is in 1000 words or less. You will want to both reflect on your past experiences and also make connections to your future profession/practice/leadership. (EDUC 5P24 course syllabus, 2010)

Reflecting on this project description reminds me of the implicit beginning of my self-study. Initially, I had interpreted the assignment as just another fulfillment of course requirements, and yet acknowledging my philosophy at the out-set laid the foundation from which all of my subsequent experiences as an inclusive educator would be built. This assignment marked the beginning of my journey. An important personal reflection to recall from this assignment was that of the concluding statement in my philosophy of inclusion:

> Essentially, my philosophy of inclusion is parallel to the idea of being a life-long learner. I am an advocate of a continual effort to maintain a sense of awareness, and curiosity in education. I have the same expectations about learning, as I do about maintaining inclusive practices because to me, they are one in the same. (Melissa, Reflection, February 10, 2010)

It was not the statement alone that was meaningful but in combination with the feedback I received from my professors, it was my first exposure to the practice of self-study. In response to this concluding piece, my professor wrote: "Nice parallel to the life-long learner-this is consistent with your position of inclusion as a process" (T. Gallagher, personal communication, February 20, 2010). It appears that I was already embracing the nature of self-study as a dynamic field of inquiry (LaBoskey, 2004). I had already developed a strong focal point from which my future experience would project: that of life-long learning.

This element of learning throughout one's lifetime emphasizes the dynamic nature of self-study and how a person's knowledge is always changing (Samaras et al., 2004). A key aspect of self-study is that answers to questions are not a destination but a starting point for continual learning and adaption (LaBoskey, 2004). It is important to seek answers to pressing questions, but most important is the continuous development of questions that lead to practices of change. Another important feature of this initial experience was that my professors had created a supportive environment from which an open dialogue was facilitated (Kitchen et al., 2008; LaBoskey, 2004). I have learnt that this too is ideal when implementing self-study. Through open dialogue I was able to interrogate my current position on inclusion and place it next to that of my colleagues.

In addition to reflecting on my ideological positioning, during the preparation phase of my self-study experience I was encouraged to keep a journal documenting my thoughts. This learning journal was

developed to assist in the reflective learning process. I took great pride in developing all of the course suggestions into a comprehensive learning journal template (see Appendix A). This template was one of my most useful and important items for my travels because it facilitated all of my reflective thought. The usefulness of this journal template is demonstrated in a specific excerpt from my pre-departure journal, "I feel a little torn because it's as though I'm already separating from here, but haven't yet landed anywhere else" (Melissa, Reflection, April 22, 2010). This statement captures the essence of cognitive dissonance that I was feeling, and this was facilitated by the journal template. An analysis of the reflection suggests I was experiencing tension between my cognitive and literal position pre-departure and the position that I would adopt post-departure (Festinger, 1957). Although because of the successful preparation I had pre-departure, I anticipated the dissonance (Festinger, 1957). This emphasizes the importance of cognitive dissonance in educational contexts. It aims to expand current knowledge and beliefs (Festinger, 1957). Dissonance allows one to successfully re-position themselves in every new educational context that they are exposed. I knew I was being completely removed from my academic and educational security, and embracing this was preparing me for change (Festinger, 1957; Hamilton & Pinnegar, 1998). Change in location. Change in perspective. Change in life.

Immersion on the Head of the Coin

My first exposure to the realities of my discomfort of change occurred immediately on the plane departure. I wrote in my learning journal, "I expected to sit with my peers but was awakened to the reality of this trip primarily being an independent experience when were seated sporadically" (Melissa, Reflection, April 24, 2010). This statement about my physical location reflects my cognitive location and my state of my mind at the time. I was turned upside down on my head. I felt scattered, overwhelmed with change and again distanced from the safety of familiarity. Although this discomfort was present, embracing it was the beginning of embracing my self-study experience. Once moving beyond my discomforts, I began critically analyzing my environment. I distinctly remember re-positioning outside of myself and imagining the discomforts I would be experiencing if I had a physical disability. There were many elements in the airport that discomforted me: the lighting, the volume, the visuals, and the washrooms. Although I was able to access all the space I was hypothetically denying myself access to, it remained disconcerting. I specifically wrote in my learning journal, "The sign displayed in the departure line indicated only one bag of luggage and must be able

to place it unattended above your head, if I had a physical disability what would my options be" (Melissa, Reflection, April 24, 2010)? I was purposefully positioning myself critically. I was engaging in a process of reflection in action (Schön, 1987). During the preparation phase of the study abroad experience I sought specialized knowledge about disability and inclusion that was applied in this specific context (Schön, 1987). I engaged in a stop-and-think (Arendt, 1971, as cited in Schön, 1987). I was exposed to a familiar territory and yet my reflective process made the territory seem unfamiliar (Patton, 2002). Although this experience did not directly affect my actions, it was an initial re-positioning of my philosophy of inclusion (Schön, 1987).

After arriving in Belgium, I recall making a critical observation in an information centre in the heart of Ghent. Upon entering the centre, I saw a sign and my first instinct was to consider it as an inclusive gesture, but as I thought more closely about the issue I came to the realization:

> Initially, I thought that the sign that said 'welkom' [welcome] with an image of a person in a wheelchair accompanied by a dog was inclusive, but after thinking more critically I realized there shouldn't be need to explicitly welcome a particular group, shouldn't it be assumed everyone is welcome? (Melissa, Reflection, April 24, 2010)

It was evident that my preparation pre-departure was heavily influencing my critical lens during my experiences abroad. I was again working systematically from a reflection in action framework (Schön, 1987). I was not accepting anything just as it was, but interrogating it further to seek a better understanding. A pattern of reflection became apparent after an analysis of my experiences pre-departure and upon my initial arrival into foreign territory. I began each new phase of my travels with an open mind and when I was exposed to an event that was powerful I reflected on the observation, interrogated it based upon my ideological beliefs, and stored the knowledge. This pattern of repetition became a cycle from which I was able to accumulate more value from my experience.

This pattern was consistent with another journal entry I made declaring my natural instinct to ask questions and further interrogate everything that I was seeing and doing, "My opinions have become so critical, I cannot seem to accept information anymore, I'm always critiquing" (Melissa, Reflection, May 30, 2010). This may indicate that the environment I was in and the framework I was approaching it with were allowing me to identify critical areas of concern because, as Mezirow (1998) indicates, "critical self-reflection of an assumption involves critique of a

premise upon which the learner has defined a problem" (p. 186). This critical reflection is valuable because it can facilitate social and personal transformation (Mezirow, 1998). This is exactly the value of my self-reflection while abroad, that it was a means to change and challenge my socio-cultural position.

The pattern of reflection in each new phase of my travels continued to repeat itself. As I engaged in new experiences in Ghent, I sought to experience them both in action and through reflection (Schön, 1987). I did not simply participate in the activities but reflected on the underlying objective of them as I was immersed in them. For instance, our group was informed we would be watching a film on the anti-psychiatry movement which was the socio-cultural shift from institutionalization of persons with psychiatric disorders to deinstitutionalization of individuals and into the community. In preparation, I explored my expectations of the experience. I wrote in my journal, "I expect I will enjoy watching the film, and that it will evoke a lot of thought about why I am here, why I truly at this point in my life have embarked on this trip" (Melissa, Reflection, April 29, 2010). This reflection helped me actively participate in my experiences and was largely facilitated by the use of my learning journal. This experience was an opportune moment for me to have an open dialogue (Kitchen, et al., 2008; LaBoskey, 2004; Schön, 1987). I fully embraced this opportunity and my reflective processes during the experience were valuable. Once the students had watched the film, we were broken off into smaller groups to facilitate discussion. I remember feeling included. It was a powerful moment for me because as a minority in a classroom full of Belgian students I could have been overwhelmed and marginalized. My experience was the exact opposite I wrote in my journal, "How I felt sharing my opinions about the film . . . very respected and supported. I felt my insight was appreciated" (Melissa, Reflection, April 29, 2010). This reflection considers the role of power and emphasizes "expert" knowledge (Goodley & Van Hove, 2005). Who possesses expert knowledge (Goodley & Van Hove, 2005)? The relationship between those that are marginalized, and those that advocate with and for them is threaded throughout this journal entry (Goodley & Van Hove, 2005). My political eye was scanning without me entirely being aware of its influence. Positioning myself as a minority in a dominant culture full of a foreign language, processes and actions, I felt I had truly captured my understanding of inclusion. Inclusion is living and breathing the inclusive practices that you advocate.

Although it appears from analyzing my reflective journal entries that I had finally reached a state of belonging, the next statement indicates otherwise. My journal reads, "I have to admit I am yearning for more

structured, academic environment" (Melissa, Reflection, May 20, 2010). It is evident by this statement that my defensiveness to my educational experiences abroad was again as a result of my cognitive dissonance (Lefrancois, 2000). Despite having previously embraced and come to a place of acceptance throughout my experience, I circled back to this space of discomfort. I was again shifting my understanding and knowledge. It appears as though I was once again preparing for re-immersion into a world that had not changed and yet had completely changed. I believe I was beginning to see the world from the other side of the coin.

Re-Immersion on the Tail of the Coin

Once I arrived back into my routine and my environment back home in Canada I was most certainly changed. A reflection of this change was heavily influenced by my responsibility to create a culminating activity of my experience as a course requirement. Specifically the criteria for this reflective assignment were: "describe your experience during your internship and articulate your learning from the course related activities" (EDUC 5P96 course syllabus, 2010). It was open to interpretation, independent, and fostered creative application. During my time abroad I was engaged in this creative process. Everywhere I went and at every moment I felt something powerful, I took a series of photographs representing the physical body. I gathered this collection of images and photographs, examined them from various perspectives, and then located an overarching theme. The theme that emerged from all of the photos as well as my learning journal was a feeling of being scattered. A salient illustration of this feeling was that at one point during the trip abroad I was paying rent in three different geographical locations in the world: St. Catharines, Ontario; St. Amansberg, Belgium; and Dublin, Ireland. These feelings of being scattered or disembodied emerged in my reflections and contributed to the development of my culminating activity. To visually represent this I cut the photographs into various pieces and artistically re-constructed them as a whole (see Appendix B.). Although I took pieces to make a cohesive whole, I began to understand that the closer I came to a new construction of my reality, the more questions I began to ask. This re-iterated the nature of my experience being guided by self-study: as I began to reach conclusions, I was situated back into de-construction (LaBoskey, 2004). I specifically asked:

> Are physical, postural and bodily expressions a universal language, can bodily expression transcend through the exclusive barriers of

language, if our bodies cannot access physical locations, how can they be expected to access important theoretical and abstract locations? (Melissa, Reflection, August 3, 2010)

It appears that at the outset I began situating myself from my Physical Education framework, challenged it while abroad and re-visited my framework with a critical lens upon arrival. I was able to provoke my educational insecurities, challenge my assumptions and illuminate the value of self-study for graduate student growth (Bullough & Pinnegar, 2001). I underwent a circular self-study experience, landing back where I had started and yet arriving not at all where I had begun the course of my trip.

The Relevance of Self-Study

Undertaking a critical analysis of my philosophy of inclusion, learning journals and culminating activity has allowed me to re-live my study abroad experience. Re-living this experience has allowed me to clearly see the value of self-study in my graduate work. I was expected to accept a shift in the construction of my world and learn that it most certainly was not the only way of interpreting the world. As Gallagher, DiGiorgio, Bennett, and Antle (2008) founders of this particular study abroad project declared: "this project may also afford graduate students who are practicing educators to critically analyze how inclusion can be improved through professional learning" (p. 34). It did this and more: it changed my perspective, my research, and my relationships. The benefits this program provided me continue to emerge as I reflect and interact with the experiences I had while I was abroad. I am so grateful to have had this opportunity and believe that programs such as this need to continue to be developed.

As for my colleagues, they too underwent changes, re-positioning of their values, and beliefs on issues related to inclusion which were reflected upon during their culminating presentations. However, I believe the true value of international exchanges of a group of diverse individuals is that although they are situated in the same country, city and town, they all arrive back home with different currency. What I learned from the experience was very different from that of my roommate in Belgium which varied greatly from other colleagues in the group. It is this diverse level of experience that continues to add depth and complexity to the value of international exchanges.

Programs that include a study abroad allow graduate students to be taken out of the traditional learning space and immersed into novel experiences. This is a potentially valuable experience for any graduate student to undertake. In order for any graduate student to expand their knowledge, they must challenge their current knowledge. I realized learning this, and sharing this with others is vital for effective educational growth. Having been exposed to different methods of instruction, I learned that teaching does not have to be rigid or tedious it can be innovative and creative. This is significant not only to the field of Disability Studies in Education but in any field that learning processes occur. Ideally, all graduate programs could benefit from such international, reflective experiences as the emphasis is on personal growth. Any program could implement a practical experience that encourages students to situate themselves in contexts they have yet to experience. This would contribute to the diversity in many programs, influence inclusive practices and the necessity to work collaboratively.

Graduate students need to be challenged. They need to engage with academic material from entirely new perspectives so that they can develop into contributors of academia. Self-study ensures that this happens. Self-study in education is not limited to students, professors in other disciplines might adopt this line of inquiry and realize positive contributions to their respective fields. It is necessary to expand academia and discourage singular, narrow thinking. Studying abroad experiences can facilitate critical reflection and cognitive dissonance that foster innovative thinking. It is this innovative thinking that can contribute to the field of education as an ever-changing and adaptive field of inquiry. Heads or tails, it is evident that the value of self-study is not limited to those that facilitate it but that the value extends far beyond to the students that are actively engaging in the process.

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MELISSA FLEISHMAN is an enthusiastic advocate of inclusion. This is evident in her collaborative team effort amongst her colleagues, her Teaching Assistant practices at Brock University, and her exploration of inclusion in her Master of Arts in Applied Disability Studies. Melissa's current research interests extend beyond inclusion of individuals with disabilities and aims to study inclusion amongst professionals who facilitate inclusive teaching environments for students with disabilities. It is her hope that graduate-level educational environments will progress from traditional practices and continue to foster creative opportunities for learning. As a second year Master's student she continues to seek these opportunities for both academic and personal growth.

Acknowledgements

Appendix A
A reflective learning journal template to facilitate theoretical re-positioning.

Date _____   Learning Journal # ____

_____
_____
_____
_____
_____
_____
_____
_____

- **Goal:** _____

- **Recorded observations:**

What I thought it would be? (i.e., see, hear)	What did I like?	What might I change?	What did I not see that might have been . . .	What ways same/different then Canada?

Appendix B
Scattered pieces of photographs from the Belgian community, artistically re-constructed into a
representation of the body – where or how does your body fit?

Advancing the Next Generation of Higher Education Scholars:
An Examination of One Doctoral Classroom

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Course content in graduate school is especially important in terms of helping students make progress toward a doctorate. However, content is merely one aspect of developing successful students. This article highlights the value of creating an affirming learning environment by discussing one graduate class on Qualitative Policy Research. The majority of student participants were graduate students of color. The authors discuss the pedagogical approaches guiding this course and outline ways in which the instructor served to create safe spaces that invited as well as validated diverse perspectives and made the research process transparent. These efforts resulted in the production of high quality research used as pilot studies for successful dissertation defenses, accepted presentations at scholarly conferences, and published articles in peer-reviewed journals. Throughout this article, suggestions for replicating a similar course environment are discussed.

The university has always taught values, in one way or another . . . Intentional or not, teaching values occurs in the classroom every day – In the material I ask students to read, in the dialogue that ensues . . . [v]alues are implicit in everything I say, write, and do. And so it should be. We teach values by having them . . . [she argues that the university must] take seriously and rigorously its role as guardian of wider civic freedoms, as interrogator of more and more complex ethical problems, as servant and preserver of deeper democratic practices. (Morrison, 2001, p. 274)

A democratic society is one where everybody believes that they can contribute to discourse; the same applies in a classroom setting. (Elenes, 2001, p. 700)

Toni Morrison's (2001) and C. Alejandra Elenes's (2001) quotes provide a backdrop for the values embodied in the class, Qualitative Case Study Approaches for Educational Policy Research (hereafter referred to as Qualitative Policy Research). This course, taught in the spring of 2009, was an advanced qualitative research course taught at a Research 1 university in the Southwestern United States. The course is discussed here from the perspective of the professor and the students (all of whom were students of color). All authors contributed their individual voices to the creation of this paper and together all created the supportive learning community in this classroom. Articulating the intricacies of this supportive environment is the focus of this paper. In particular, we provide a review of relevant literature on mentoring doctoral students of color. We then discuss the

pedagogical approaches guiding this course and outline ways in which the instructor served to create safe spaces that invited as well as validated diverse perspectives and made the research process transparent. These efforts resulted in the production of high quality research used as pilot studies for successful dissertation defenses, accepted presentations at scholarly conferences, and published articles in peer-reviewed journals.

Review of the Literature

Literature on doctoral students of color suggests that they are less likely to experience scholarly socialization and mentorship than majority students (González, Marin, Figueroa, Moreno, & Navia, 2002; Turner & Thompson, 1993). The lack of mentorship received by these students is disconcerting as research indicates that doctoral students who receive mentorship are more likely to be prepared for their chosen discipline (Lyons & Scroggins, 1990). To further complicate the matter, numerous definitions of mentoring exist within the literature and there is a lack of clarity regarding necessary components for effectively mentoring doctoral students of color (Brown, Davis & McClendon, 1999; Davidson & Foster-Johnson, 2001; Hodge, 1997). In addition, most literature on doctoral student mentorship focuses on a didactic apprenticeship role between professors and their students in a research setting (Reybold, 2003).

Mentoring programs exist to provide structured interactions between graduate students and faculty/administrators that are geared toward increasing the probability of degree completion and career success (Brown et al., 1999). Socialization and acculturation

have also been identified as critical for students of color to succeed in completing graduate school or earning a Ph.D. (Busch, 1985; Dorsey & Jackson, 1995; Gardner, 2008; Shultz, Colton, & Colton, 2001; Turner & Thompson, 1993). Van Stone, Nelson, & Niemann (1994) reported that graduate students of color typically attribute their success to three aspects: personal ambition, supportive family and supportive faculty.

Deeply embedded within the literature is the notion of differences between students' cultures and the culture of academia. Mentors who are unfamiliar with the challenges facing students of color in developing competence within the culture of academia may not know how to respond to help such students (Alvarez, Blume, Cervantes, & Thomas, 2009). Furthermore, the mentoring needs of students of color, related to professional education, socialization, and development are unique and should have more direct guidance from faculty (Alvarez, et al., 2009). However, Alvarez et al. (2009) also state that "issues raised in [their] article should serve as broad guidelines, and their applicability to specific students should be assessed by the mentor" (p. 182). Alvarez et al. (2009) list several ways in which the cultural orientation of students of color may differ from others attending graduate school: first, "students of color may have attended schools within their cultural communities, entering graduate school . . . may be their first exposure to being in the minority in a school environment" (p. 183); second, "cultural values of deference to and respect for authority can contribute to being silent when in class or in lab meetings and may prevent students from actively seeking out help and mentoring from faculty" (p. 183); and third, "values regarding family may also conflict with the expectations of higher education" (p. 183). Given these and other concerns, Davidson and Foster-Johnson (2001) suggest an effective faculty mentor is one who cultivates an understanding of the experiences of students from various culturally diverse backgrounds. They conclude that

> [b]ecause a cultural pluralist perspective is not embraced universally, either in the workplace or in educational institutions, students must be guided in nurturing a passion for creating a pluralistic environment while simultaneously learning strategies for dealing with what may be an imperfect and hostile workplace reality. (Davidson & Foster-Johnson, 2001, p. 554)

While the body of research related to doctoral students of color continues to evolve, we seek to illuminate the benefits of scholarly socialization and mentorship as experienced in a graduate course by emphasizing the professor-to-student interactions in advancing doctoral research agendas and dissertations.

The process used in this course can be used to advance the scholarly development of doctoral students at other institutions within academia. With respect to mentorship and socialization, it is important that research continue to focus on the needs of doctoral students of color. A key way to meet these needs is by providing an environment that is conducive to learning and in which students feel comfortable and confident to communicate.

Pedagogical Approach Underpinning Course

The professor's pedagogical approach or practice of teaching involving students in decisions/actions with regard to learning served as the ideological guidepost for classroom interactions and discourse. This approach suggests that each class is an emerging learning community, even if the content and the instructor are the same. Who is in the class creates a unique synergy, a life or group environment of its own. In addition, each class is comprised of the current knowledge possessed by all participants and it is upon this collective knowledge that we build new knowledge and understanding. While intellectual growth may happen on an individual basis, it is also developed through open discussions of our collective learning processes as we engage the course material and apply that material toward the completion of a final research project and paper. Small group and large group discussion needs to occur at each and every class.

Part of the introduction to the class includes an acknowledgement of mistakes as an integral part of the learning process. Thus, when students' attempt to apply the research approaches to be learned in class, mistakes will be made. Based upon the professor's experiential knowledge, doctoral students want to demonstrate their academic competence by performing at an exemplary level. As such, students work arduously to illustrate their ability to correctly complete course projects. . This behavior is likely fostered by faculty. For example, success is presented as a final product, a completed paper or a dissertation. However, showing final products does not allow others (e.g., faculty, colleagues) to understand the processes that go into the production of a final product. Learning is an uncomfortable process, full of experimentation and times when current and aspiring researchers stumble in order to learn. In the Qualitative Policy Research course, mistakes are directly acknowledged as part of the learning process and are to be shared so that all classroom participants (e.g., students, faculty) can learn from one another.

Students are also encouraged to critique the very material they are learning to apply by reading and reflecting on scholars who question the assumptions inherent in each methodological approach they are

learning to use (e.g., Smith, 1999). They are also encouraged to share their individual critiques based on the experiences they are having in the field as they implement qualitative research approaches. They have access, either in person, through email or class conferences calls, to some of the scholars whose work they are reading in order to clarify their understanding of the material (e.g., Auerbach & Silverstein, 2003; Cuádraz, 2006; Krueger & Casey, 2000; Merriam, 1998).

Also directly acknowledged and talked about is that, at times, it is natural for anyone to feel anxious and question one's ability to successfully complete all the course requirements. Students are assured that, while this will likely occur, all who have taken this class before have felt similarly at one point in their process but all have completed the course. The goal is to strategize together, as a team, and help each other find solutions to potential individual barriers. Furthermore, many students go on to present their papers at professional conferences and submit their papers for publication. There is no reason why students cannot present and publish prior to their graduation, so these activities are encouraged. This is what has occurred in the case of all the authors listed on this paper. What makes this endeavor unique is its collective nature.

Critical to the effectiveness of the Qualitative Policy Research course was a model of mentoring that encompassed the following: (1) a faculty member who encouraged the individual understanding gained from the various cultural experiences shared among the classroom; (2) continued opportunities to engage with faculty; (3) mentor-protégé interactions within a classroom setting; (4) a professional socialization of students that included networking; (5) a holistic approach to learning that de-emphasized competition and encouraged collective learning among peers; (6) diversity within disciplines and students' ethnic background; (7) professional research and writing guidance; and (8) discussions of personal experiences as they related to academia. In the following sections these eight points are woven into a discourse on safe space, diversity, research, strategies for incorporating intersectionality in the classroom; and communicating research findings. First, we will discuss how this course created a "safe space" for classroom interactions and discussions.

Safe Space

Components of a successful support system for graduate students of color generally consist of, but are not limited to: ongoing monitoring of student work and progress, building personal support networks, building relationships with faculty and other professionals, consistent feedback, and a non-competitive environment. These components were evident in the Qualitative Policy Research course. This combination of elements created the conditions for a safe classroom space that give way for all students to feel they were legitimate stakeholders in the learning environment. A non-competitive environment is important because cooperative conditions in the classroom often alleviate tensions and produce an atmosphere comfortable to most.

When students feel comfortable, they experience lower levels of anxiety and often perform better. As a result, the 'safe space' created in this course served to lower students' anxiety and, we believe, led to better performance. This approach created a positive faculty-student experience which led to favorable views of the classroom environment (e.g., Endo & Harpel, 1982; Haines & McKeachie, 1967; Tinto, 1987), which positively affected student gains and overall classroom satisfaction. Tinto (1987) stated that student-faculty interactions, which include both formal classroom experiences and informal interactions outside of class, are crucial to the academic continuation and intellectual development of students. Likewise, when discussions were structured cooperatively, students felt less tense, displayed more task-oriented behavior, worked more effectively, and enjoyed the classroom discourse (e.g., Haines & McKeachie, 1967).

Existing research suggests that student-faculty interactions are important to a student's college experience (e.g., Woodside, Wong, & Wiest, 1999). In general, the more contact between students and faculty both inside and outside the classroom, the greater the student development and satisfaction (Astin, 1993). It is without question that as contact between faculty and students increases, learning outcomes and student satisfaction increase. Informed by this research, the professor worked to ensure that continual in-and-out of class interactions took place. In particular, the focus of classroom interactions between faculty and students served to facilitate the development of a safe space by: (1) providing continual encouragement to students; (2) giving constructive criticism on course progress; and (3) providing timely and in-depth feedback on assignments.

When working with students, the course faculty member made sure to explain the need for improving qualitative research related skills and competencies (Kuh & Hu, 2001). In doing so, the faculty member addressed her own personal development as a scholar. This included noting mis-steps and successes on her pathway to becoming a senior scholar. In addition, the faculty member attempted to model behavior that demonstrated openness in the classroom. The purpose of this behavior was to establish an existential posture, which served to create an affirming environment. In

particular, faculty sought to model a worldview that was inclusive and respectful of difference while avoiding ethnocentric power dynamics. As noted by Alvarez et al. (2009), this approach communicates acceptance of difference.

The faculty member believed that it was important to permit students flexibility in their thinking around course topics and that time spent sharing ideas and discussing topics was relevant to qualitative research. While such discussions are likely to elucidate new ideas and improve existing ones, there can also be challenges in dealing with divergent opinions, sensitive topics, and lack of knowledge with regard to individual and group differences. Thus, the professor established a classroom space where multiple ideas, identities, and concerns could be heard and valued. However, embracing a multitude of students and ideas does not always come about on its own; instead, it is important to invite and embrace these differences.

Diversity

The success of the Qualitative Policy Research course in supporting students' progress towards their dissertations was advanced by the diversity in the classroom (e.g., ethnicity, discipline, research abilities). With respect to ethnic backgrounds, the course faculty and students were diverse. For example, the instructor is a woman of color professor, of Filipina and Latina descent. For more than twenty years, her research has focused on using qualitative methodologies to critically examine, deconstruct, and address the condition of diverse individuals, particularly women and people of color, in academe. As a result, she was affirming of students' research interests on issues, which focused largely on diversity in education. Her engagement, support, and excitement for these lines of research imbued a sense of belonging in the academy for course participants. While the students in this course were fortunate to have a professor with years of professional and lived experience related to diversity, it is not a requirement that a professor or student be a person of color in order to value diversity. The authors believe that anyone seeking to support and engage others can be purposeful in seeking out and valuing diversity. This diversity can come in a variety of ways and create a cohesive community despite differences.

Course participants also benefited from the racial/ethnic diversity of students. While students were representative of various groups such as African Americans, Asian Pacific Americans, Latinos, and Native Americans, the interaction among students was cohesive. Students attributed this to many shared socio-cultural experiences, such as: (a) being first-generation college-going students; (b) representing traditionally underserved and marginalized students groups; and (c)

possessing a desire to research and improve the condition of their racial/ethnic communities. Further, students' experiences and research focused on diversity. This common tie elevated the classroom discourse to critically-centered dialogues on multicultural and multiethnic issues. As a result, students challenged each other in ensuring that Eurocentric perspectives/values commonly associated with diversity research (e.g., deficit model, exceptionalization of success, over-simplification of in-group similarities, assimilatory practices) were avoided. Altogether, student diversity created an environment which rejected western values of individualism in exchange for an environment of enthusiasm, comfort, and collectivity.

In addition to ethnic diversity, students were representative of various academic disciplines. These diverse backgrounds allowed students to bring multiple perspectives in the conceptualizing, designing, implementing, and critiquing of student research projects. While course participants were representative of various doctoral-level disciplines, this accounted for only a surface-level picture of the academic diversity of students. When one considers students' prior academic degrees (associate, bachelor, master), disciplinary backgrounds illustrate further expertise in a wide range of fields (e.g., biology, black studies, sociology, Chicano studies, history, and organizational management). These theoretical lenses aided students in crafting high-level academic research. The plethora of lenses, expertise, and world views enhanced students' personal and academic contributions.

Research

Well-designed courses, safe spaces, and diverse environments can create an optimum environment for the production of exemplary original research. We detail the ways in which students were shepherded through the research process.

Fear, anxiety, and ambiguity often confront students as they engage in research (Lee & Norton, 2003). The obscure notion or mystification of conducting a study is an important issue to address in training graduate students to become researchers (Cardozo, 2006). Taken as a whole, this Qualitative Policy Research course sought to demystify all the steps in the research process, including conceptualizing a study, designing research instruments, collecting data, coding and analyzing data, explicating findings, and writing a dissertation. This was accomplished through a meta-level discourse which acknowledged mistakes and missteps encountered in the research process. To further facilitate student success, the research process itself was demystified through the use of four steps: (1) breaking down the qualitative research process into doable steps (scaffolding); (2) employing real-life examples of the

final product (the dissertation in this case); (3) discussing the research process, including facilitators and setbacks. This included allowing students to access the author's of course readings through direct contact; and (4) providing a platform for individual graduate students to voice their challenges. This resulted in group problem-solving (this process is referred to by students as collegial sounding boards).

Demystification was also aided by a scaffolding approach in which each respective element of the research process was addressed separately by the collective group of students. These respective elements, akin to building blocks, were then used to construct a larger and more comprehensive framework for understanding the research process. While this approach could have encouraged linear thinking among students on the processes involved in conducting qualitative research, the professor pointed out that, while the steps undertaken may be characterized within static categories, qualitative research processes are not static; rather they are non-linear, multi-dimensional, and dynamic. Also emphasized was the need for researchers to adapt to emerging understandings of the data. Thus, each of the steps listed above may then occur during each stage of the research process, beginning with the conceptualization stage.

Professors can provide examples of their own research process, including dissertation completion, and the barriers as well as facilitators encountered along the way. As noted by Brem (1994), "using examples of one's own research brings the process down to earth for the student, makes it seem more relevant to the student, and gives it an applied context" (p. 243). A professor sharing rejected research questions on the way to her/his dissertation research question when students are conceptualizing their study can provide timely encouragement for students to persist. When accomplished faculty members reveal their challenges, they promote a safe environment in which students can reveal and overcome their own self-doubts. Likewise, in the Qualitative Policy Research course, the professor discussed her dissertation research noting how institutional policy, culture, and politics affected the development of her dissertation and how research questions and study conceptualization shifted from the original design.

Accessibility to the methodologists who authored required course readings is another step that can aid in the demystification of the research process. In this class, text authors were invited to present to students. When possible, authors presented in person; however, when proximity was a barrier to access, presentations were given via virtual technologies (e.g., SKYPE, Adobe Connect). As such, experienced experts were accessible and available to interact with students. These experts provided insights on the implementation of their

research approaches (e.g., study conceptualization, design, data collection, analysis, and writing). Author interaction added to an environment which communicated the idea that that "we are all in this together." In this environment, course sessions served to provide active and collegial sounding boards where all students learned and participated. In addition to discussions with text authors, a course panel was conducted by former students. This panel helped current students to better understand the research process and to be patient with the development of their respective projects.

As the students in the Qualitative Policy Research course had varying levels of comfort in speaking in large group settings, class schedules included time for small group discussion encouraging students to: (a) share the progress of their research projects; (b) pilot interview protocols with other group members serving as mock participants; (c) review successive drafts of human subjects applications and research write-ups; and (d) serve as a support group to recognize each other's successes and encourage peers when pitfalls occur. Key to the success of these peer small groups was the participation of students as members of the scholarly collective who work collaboratively throughout the steps of the research process. The intimacies with which colleagues begin to understand each other's research lead to deeper insights and richer discourse. Such dialogue contributed to student confidence and a deeper understanding of their voices as researchers. Thoughts, concerns, and scholarly resources (e.g., journal articles, books) emerged from the small group discussions and were brought to the larger group so all students could learn from the small group discussion. This further allowed students to engage in collective problem-solving process, as needed.

Strategies for Incorporating the Complexity of Intersectionality in Classroom Workgroups

One of the important factors in developing a diverse and effective work group involves respecting and paying attention to the ways in which multiple factors impact one's identity and interactions in a classroom work group. Scholars have discussed the ways in which individuals often experience gender, class, and racial statuses simultaneously (Davis, 1981; King, 1988; Zavella, 1993). While there is no single definition for *intersectionality*, the term has been used to describe the ways in which, for example, race and gender interact to shape the experiences of women of color (Crenshaw, 1989). However, more current research has expanded original depictions of intersectionality to include other factors such as social class, English language proficiency, citizenship, and a

more broad understanding of social, familial, economic, and political intersections (Collins, 2000; Crenshaw, 1991; McCall, 2005).

In the Qualitative Policy Research course, allowing students and members of workgroups to define themselves and their own experiences was invaluable to the success of the course. This allowed course participants to avoid making assumptions and provided a space for mutual understanding of students' multiple identities. As is evidenced in Moraga & Anzaldúa's (1983) edited volume, people who at first glance may appear similar, view the world in a multitude of ways and can have very different lived experiences despite common threads woven throughout their lives. Therefore, in this course, the professor stressed the importance of avoiding the use of stereotypes (e.g., assuming that students of color are first generation college students or are from poor families). Instead, the professor created a safe space designed to allow students to feel comfortable with describing themselves and sharing their own stories. It is important for the professors or group leaders to model this behavior (i.e., the avoidance of stereotypes) and to set classroom expectations at the onset of the course so that all students will be allowed to define themselves. Knowing that multiple factors influence students' identities and relationships with others is important to fostering an environment in which people can express themselves. However, utilizing that knowledge to improve classroom dynamics is only part of the picture. Understanding intersections of race, class, gender, and so on is also important with regard to the classroom structure and logistics.

Anzaldúa (1999) recognizes the ways in which the ability to code-switch, express oneself in multiple languages, formats or forms, and develop a connection between ethnic heritage and scholarship not only enhance, but illuminate the learning experience. Thus, when developing syllabi, course assignments, and criteria, instructors can take these things into consideration. For example, in the Qualitative Policy Research course, students were encouraged to use language that represented their study participants' views even if that language included slang, non-English words, or colloquial pop culture terms. Students were allowed to write their papers in any form that conveyed information, produced knowledge, and spoke to various audiences. Students were able to use narratives, poetry, white paper formats, or academic style research reports. This is imperative to accurately portray participant constructions of their experiences. The authors believe that limiting the style in which people are able to express themselves shuts down the creativity of individuals and groups and may intercept meaning and depth from readers. Therefore, it is important to allow freedom for students to perform.

In recognizing that race, class, gender and other factors influence research, the instructor addressed course diversity through personal and group reflections and asking for clarification or differences of opinion. She also encouraged students to test ideas, interview protocols, and discuss assumptions with others. Group members served as excellent resources for honest yet constructive feedback. Keeping the intersectionality of variables at the forefront of research process helped the students and the instructor to make sense of study participants' socio-cultural realities. In reflecting on this process, the authors identified a non-comprehensive list of ideas for trying to create diverse classrooms that value the intersectionality of the students in those classes.

1. Actively recruit students from previous classes from diverse backgrounds and various disciplines. To do this, send out descriptions of your courses to graduate program administrators and staff in different departments and graduate student list serves and organizations to reach out to individuals and encourage them to enroll in your class.

2. As a professor, allow students to cite reference materials according to their primary discipline's preferred format and open yourself up to reading new literature. Students should feel comfortable taking classes outside of their discipline and should not feel badly if they are not familiar with many of the scholars being referenced in discourse, but should instead use it as an opportunity to learn from a different perspective.

3. Recognize that issues of race, class, gender, sexuality, etc. can spark intense emotions. If the classroom is a safe environment, students and professors can learn to acknowledge others' perspectives, question assumptions, and disagree without chaos ensuing. If people in the class are willing to actively listen and try to understand rather than defend their own position or convert others, people can have an active and engaging dialogue.

4. For many students, family and work responsibilities or other personal constraints will likely impact students' experiences. Being sensitive to and flexible with regard to options for making up work can be extremely important in retaining students. Additionally, communicating with other people in the class can be significant in letting people know what is going on, rather than having people assume there is no longer interest, and will alleviate confusion and resentment.

5. Diversity of people, ideas, strategies, and research areas can be especially productive if people focus on shared goals rather than individual differences. Incorporating diversity does not involve getting everyone to agree and developing a homogenous population, but instead allows for the inclusion of multiple perspectives and challenges to the status quo.

After the course was over and the research papers were written, turned in, and graded, the students were encouraged to communicate their research findings to a broader audience (beyond the course participants).

Communicating Research Findings

Many academic papers that are written are not made available for public or scholarly consumption. This unfortunate reality can be attributed to low acceptance rates in primary journals and at conferences, the heavy use of jargon, lack of new findings, or underdeveloped studies. However, another reason more scholarly work is not made available is because scholars do not follow through on the publication or presentation process. The professor of this particular course consistently encouraged students to continue to work on their projects and go beyond filing them away after the class ended. Therefore, several class members decided to submit a proposal to a refereed international research conference.

After the course, students wrote personal narratives about their scholarly development and progress towards the completion of their dissertations in relationship to the Qualitative Policy Research course. Personal narratives were developed as informed by the emic (insider) tradition of scholarly personal narrative (SPR), akin to personal experience narratives (Fries-Britt & Kelly, 2005). According to Nash (2004), SPRs represent scholarly writings in which authors examine their perspectives and experiences as a catalyst for academic inquiry. In particular, SPR is a framework which enables underserved and alienated communities (e.g., women, people of color) to present counter-narratives that challenge the dominant master-narratives of higher education. Given the demographic makeup of our research collaborative (e.g., women, students of color) and students' individual research interests on women and/or communities of color, this approach seemed a natural fit.

Narratives were used as the text from which themes were elicited via an ideas-grouping approach (e.g., Auerbach & Silverstein, 2003). Using this approach, recurring phrases, statements, and themes were identified in the narratives. Themes were grouped together into emergent categories and then into theoretical constructs. This interpretive coding process

was conducted during two post-class group meeting sessions and resulted in the expansion, reduction, and/or elimination of themes, categories, and constructs. Preliminary findings from the narratives were presented at a roundtable session, entitled "Advancing the Next Generation of Higher Education Scholars: An Examination of One Doctoral Classroom," at the 2009 annual meeting of the Association for the Study of Higher Education (ASHE) in Vancouver, BC (Turner et al., 2009). The roundtable discussion produced added clarity, understanding, and cohesion between and among emergent theoretical constructs. Additionally, individual class members submitted their own research projects to a variety of conferences within their own disciplines. These projects were accepted for presentation at other research conferences (e.g., American Educational Research Association, International Society for the Exploration of Teaching in Learning, and the American Association of Community Colleges).

As a result of post-class research presentations, the authors suggest that students take the following steps once a course ends: (1) continue working on their research; (2) ask professors or other students to read their papers and offer suggestions regarding which conference(s) to submit the paper; (3) ask classmates, professors, and other students if they are interested in putting together conference panels, roundtables, or posters; (4) solicit feedback from others about potential journal outlets. Once students have ideas, read those journals to get a better idea of what types of studies/formats/projects they accept for publication; (5) submit their work to conferences or journals, or as chapters in edited books; (6) consider writing white papers for a public audience and publishing them on a website; and (7) develop a workshop where they can disseminate their research to a public audience.

Implications for the Future

As evidenced in the course case study referenced above, successful courses take time, planning, and personal and structural support, as well as a common goal, all of which must be carried out throughout the length of the course itself. A combination of factors including outstanding faculty leadership, a diverse group of individuals, respect, various levels of expertise, and a safe environment in which people can ask questions, share successful experiences or obstacles, and reflect on both individual and group dynamics help produce an effective classroom workgroup. Although the environment discussed in this paper is not one that can always be found in the field, facilitating the development of an affirming environment can serve to enhance students' understanding of what is needed to become exemplary

researchers. Scaffolding and supporting the steps in the research process may make a very large goal seem manageable. In this manuscript, the authors have offered several ideas for developing a course and helping students see the research and scholarly process through to completion and beyond. Having met each other in the Qualitative Policy Research course and in the process of writing this paper as a collaborative, the instructor and students remain in touch with one another continuing to support each other as they face challenges as well as applaud each other's accomplishments. Some continue to collaborate on other research and teaching projects. Two have completed their doctorates and others are doctoral candidates, having passed their dissertation proposal defenses. As reflected in their brief biographies, all continue to serve in critical roles in the academy. The authors of this paper hope that faculty members as well as graduate students find the information presented here useful in crafting strategies toward the creation of affirming learning environments that promote the teaching and learning of successful research processes and approaches.

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Enhancing Student Engagement in Large, Non-Disciplinary First Year Survey Courses

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Large first year survey units pose unique challenges to both teachers and learners. Survey units are designed to deliver non-disciplinary specific knowledge about a given subject to a wide audience of learners. However, first year students in these units often find that they are unable to identify the architecture of such units, and are hence uncertain of what they need to take from the course. Employing a mix of qualitative and quantitative data, this article highlights the unique challenges of teaching large survey courses, identifies the causes of anxiety and disengagement amongst learners in such units, and reports on a range of innovative practices that were designed to assuage apprehension and engage first years enrolled in survey courses. It demonstrates how integrating assessment techniques that provide developmental and skills-based feedback, tasks that signpost their performance, and encouraging students to move beyond a surface learning approach can enhance the engagement of the students across large first year survey courses towards the unit material.

Large first year survey units pose unique challenges to both teachers and learners. Survey units are designed to deliver non-disciplinary specific knowledge about a given subject to a wide audience of learners. But first year students in these units often find that they are unable to identify the architecture of such units, and are hence uncertain of what they need to take from the course. Furthermore, with great numbers of students enrolled and high student/staff ratios, it is easy for first years in such courses to feel isolated and demoralised. However, there is a great deal that teachers can do to alleviate student anxieties in large first year survey units.

This article is the outcome of a research project that was directed at identifying the learning needs and experiences of first year students in large first year units in Australian universities. Employing a mix of qualitative and quantitative data, it highlights the unique challenges of teaching large survey courses, identifies the causes of anxiety and disengagement amongst learners in these units, and reports on a range of innovative practices that were designed to assuage apprehension and engage first-years enrolled in survey courses. The authors of this paper approached the development of innovative teaching practices through the assumption that the most successful solutions to these problems would be premised on enhancing levels of student engagement, and so the approaches detailed in this study represent a refinement of existing pedagogy about engaging students in their first year at university.

The objective of this study was to evaluate how our teaching practices can enhance student engagement, as measured through assessment results, submission rates and unit evaluations. In particular, we aimed to address student disengagement by introducing assessment tasks that addressed diversities in learning styles so as to encourage students to engage more deeply with academic and intellectual skills. This research project, and this article, attempts to explore how we, as university educators, can help first year students adjust to university teaching styles and to engage with the course content.

Method

The research for this article was conducted at two of Monash University's largest campuses, Clayton and Caulfield, where a combined total of around seven hundred and fifty students are enrolled each year in INT1010, the case study used in this project. The School of Philosophical, Historical and International Studies at Monash University administers and teaches into the International Studies sequence within the institution's Faculty of Arts. Central to the sequence is a first year survey course that is compulsory for all students who major in International Studies, INT1010 (Contemporary Worlds One). INT1010 is at its heart an introduction to world history after 1945, but is meant to provide grounding for students looking to pursue studies across a range of disciplines. Apart from the International Studies major, the unit contributes towards majors in Political Science, History, Communications, Journalism, Sociology, and Anthropology. It also draws in significant numbers of students from non-Humanities degrees, most notably from the areas of Business and Economics.

This study was based on several sources of data. Apart from the assessment results for 2008 and 2009, the most significant corpus of data was a set of collated student responses to a questionnaire. Questionnaires were distributed in tutorials to those students who had both completed INT1010 and who wished to be involved in the study. The survey asked students to give

details of their high school experience in both history and international studies; their self-assessed level of knowledge of the subject matter prior to starting INT1010; their assessment of the lectures, the tutorials and the readings. It also contained a reflexive question on their own learning style, which asked them to complete this sentence: "I learnt best in Contemporary Worlds I when . . . " This survey was completed by 198 students, 70 (35%) from the Clayton Campus and 128 (65%) from the Caulfield Campus. From these surveys, focus groups were convened of those students who indicated on the questionnaire that they were willing to participate. Twenty students answered a set series of questions about the structure of the course, the tutorials and the reading material.

At the end of every semester, students at Monash University complete a multiple choice survey for each unit that they are enrolled in. The evaluation is completely anonymous and the results are correlated by the university and then sent to the coordinator of the unit. The evaluations contained the same fourteen questions in both 2008 and 2009. The responses to these questions were mined for evidence on how students felt about the clarity of the course objectives, the learning resources provided, how stimulating they found the unit and their overall satisfaction with the quality of the unit. For the 2008 unit evaluation, 599 students (69%) completed the evaluation. In 2009, 428 students (38.98%) submitted an evaluation. The discrepancy in response rates had to with the medium of the survey itself. In 2008, students filled out a paper survey in the final class, whereas in 2009 they were invited (as part of a university initiative) to complete surveys online.

Differentiating the two years of teaching INT1010 was a substantial revamp of the program that was conducted in 2008, and designed specifically to meet student learning needs and enhance engagement. Specifically, the content focus was streamlined to focus on world history post-1945, whereas the pre-2009 course looked at the twentieth century in its entirety. This allowed for a greater emphasis on a smaller number of themes, such as communism, nationalism and the end of empire and the economic rise of developmental states. In addition, the focus of the assessment was on continuity between the two written tasks, and a building of skills rather than two relatively mutually exclusive tasks. We believe that a comparison of the data and of what the students had to say about how they learnt and the anxieties that they had about the design of each iteration of the course provides valuable insight into teaching practices in large first year survey units.

Student Engagement

Making a successful transition between vastly different models of learning and lifestyle is a critical component in achieving a range of positive student outcomes at university, chief among them completion and achievement (Leach & Zepke, 2009). And one key factor that helps ensure that successful transition between high school and university occurs is student engagement.

Student engagement can be broadly understood as "the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes" (Krause & Coates, 2008, p. 493). As van der Meer and Scott (2009) observe, the concept of student engagement has gained much traction in pedagogy in more recent years, and its importance is increasingly enshrined in higher education policies at institutional and national levels. At its core, the notion of enhancing student engagement hinges on institutions and staff actively creating conditions to encourage and facilitate student involvement, and ensuring that there are ample opportunities for students to interact with staff and peers to benchmark their learning so as to reaffirm their sense of self-belief and avoid feeling left behind (Davis & Murrell, 1993).

The diversity and size of the learning body is a key source of student anxiety and disengagement. INT1010 is taught at five of Monash University's campuses across Australia, Malaysia, and South Africa, and hence students enrolled in the course come from a broad spectrum of academic and cultural backgrounds. Adding another layer of diversity is the size of the student cohort, which totaled over a thousand in 2009 (close to 800 in Australia, nearly 300 in South Africa, and 100 in Malaysia). Such numbers mean that the staff/student ratio tends to hover at an average of 70:1. Research by Krause and Coates (2008) has shown how such high staff/student ratios can be incredibly detrimental to students' learning experience and the sense of connection that they feel with both staff and peers.

Because INT1010 is such a large unit and has a non-disciplinary focus, the student cohort is made up of students of a variety of ages and levels of knowledge with regards to the subject matter. While most students are school leavers, there are a number of mature age students returning to study. Likewise, the knowledge base of the students varies considerably. Twenty-six percent of students reported never having studied twentieth century history before, while 74% had studied "history" (here encompassing a wide range of periods not always relevant to twentieth century world history), International Studies, or both in high school.

The unit consists of a two-hour lecture and a one-hour tutorial every week. The course texts include a textbook of twentieth century history and a course-book that contains a mixture of primary (or contemporary) documents, journal articles, and book chapters from selected texts.

Table 1
Sample Scores and Marking Comments from INT1010, 2008

Student (pseudonym)	Grade	Marker's comment (extract)
Teddy Chew	C (50-59)	. . . a self-contradictory undertone in your argument
Mary Lowe	B- (60-64)	. . . a tangled thread of several (albeit very interesting) facts without a clear focus
Ira Sims	C+ (55-59)	. . . try not to use dictionary definitions as evidence
Allie Light	N (40-44)	. . . a complete absence of research
Natalie Driver	C+ (55-59)	. . . try not to contradict yourself as you present your argument
William Cray	B- (60-64)	. . . convoluted. Express your ideas in a more directive and coherent manner
Brady Nielsen	C+ (55-59)	. . . not easy to identify what your argument actually is
John Downs	B (65-69)	. . . argument was revealed only at the end
Rob Sanders	C+ (55-59)	. . . argument not backed by evidence
Sarah Biggins	B+ (70-74)	. . . make sure your argument is sustained through the essay

Learning Styles and Student Disengagement

One of the main causes of disengagement both within large first year university courses in general and in INT1010 in particular is an incompatibility between the expected learning styles of first year students and those of the university educators. There is a need for students to rapidly adjust from a method of learning where they are often told what they need to know to one where they must direct their own learning. This has been widely documented in the educational literature and is not only restricted to Australian universities, or to the teaching of history (Booth, 2005; Burch, 2008; Herington & Weaven, 2008; Huntly & Donovan, 2009; Leamnson, 1999).

The phrase "learning style" indicates the way that a student tends to approach the cognitive processing of information. The literature mainly distinguishes between two types: surface learning and deep learning. The "surface" learning style is characterized by students reading and listening for facts and attempting to memorize or learn them to reproduce them in assessment tasks, while the "deep" learning approach involves focusing on the meaning and conclusions reached in a text or a lecture, and seeking to integrate these into a more holistic view of the topic (Heikkilä & Lonka, 2006; Ramsden, 2003).

These issues sometimes stem from a lack of time and energy on the part of the students, most of whom work at least part-time and have a full-time study load. However, we believe that another possible cause for this lack of engagement is a deficit in self-learning skills. Students do not understand how to read an article or a textbook and find the information we hope they garner from it. Many do not know how to read a journal article and decipher an author's opinion from fact. And many do not understand how to write a university-quality essay that sustains an argument and presents evidence to substantiate their opinions, rather than simply summarizing the facts.

The evidence for this can be found in the qualitative feedback given to students for their research essays. In 2008, the mean score for student essays in INT1010 was 60.55%. Out of 100 student essays selected at random, nearly two-thirds had been marked down due to weak arguments or a lack of research-based evidence, as we can see from the sample listed in Table 1.

The data from 2008 points to a fundamental issue common internationally among first year university students: while a section of students naturally gravitate towards a deep learning style, most students do not. They are often not encouraged nor have the need to graduate to deep learning styles in high school, as systems in countries such as Australia and Britain are geared towards following formulas and applying models, even in essay writing. Students are given a very concise outline of what is examinable, and are encouraged to learn this. Definitions and formulae are preferred over a deeper understanding of concepts.

In addition, the mode of teaching employed in high schools largely follows a teacher-as-expert paradigm. It is thus common for students to view the lecture as the primary source of learning at university (Booth, 2005). Indeed, our own surveys of almost 200 students who took INT1010 showed that almost 20% felt they learnt best when they attended the lectures. Both Booth (2005), as well as Burch (2008), found that newer cohorts of students – at both the undergraduate and postgraduate level – were entering courses with the belief that the information they needed to know would be told directly to them, and that lectures would be the primary mode of learning. Such a passive mode of learning supports students in their adherence to a surface model rather than necessitating them to develop a more complex appreciation for learning.

When considering the different sources of learning first year students can engage with – lectures, tutorial discussion and completing readings – the lecture is the most passive mode of learning. It requires little preparation or effort on the part of the student, even for those who are most efficacious in their study habits and who take notes. The lecturer gives them the information directly. Tutorial discussion is much less passive, requiring students to talk about the information they have learnt. However, tutorials can be passive if the student does not actively participate in the discussion, allowing the student, again, to be witness to the information being shared without contributing or thinking themselves. Set readings are intended by course coordinators to be the main source of information. Well-meaning lecturers often hope that students will use the readings to flesh out the ideas and facts they have gained from the lecture, and be exposed to a variety of scholars' opinions. Unfortunately, many students view these readings as a supplement to the lecture material. Thus, while lecturers would prefer student learning to be self-directed, in the form of reading and analyzing texts and documents, students prefer the passive mode of the lecture.

This was largely reflected in the survey we conducted of our first year students. When asked to comment as to how the tutor could enhance the student's learning in tutorials, a common response was to have the tutor give the class a summary of what they were supposed to be "taking away" from the lesson. Other students requested less required reading but more discussion in tutorials. These responses indicate a clear desire from students for tutorials to be more about gathering the information needed for assessment tasks, be they essays or exams, rather than a chance to explore their own understandings of the reading material. Questions in the survey about the texts revealed that students preferred straight-forward textbooks as opposed to journal articles and primary documents. Many students commented that they found the primary sources were either difficult to read, boring or that they were unclear about what they were supposed to be gleaning from them. For example, one student wrote:

> I thought that whilst they [the readings provided in the course-book] were interesting, some of the readings weren't very useful and that instead of certain speeches it would have been better to have other historical accounts of events to give a more rounded picture.

While this student's opinion is not that of the majority – there were many students calling for a list of "optional" readings so that they could read more broadly on topics that interested them – it does demonstrate the mindset of many first year students that it is more useful to be supplied with a historical account that summarizes the event for them rather than a collection of primary documents that requires the student to analyze the event for themselves.

This student also identifies the key characteristic of a text that first year students are looking for in reading materials: utility. While she concedes that these articles are interesting, they are not *useful* to her. It is hard to imagine that they were not useful in educating her about the events, given she is referring specifically to speeches of political leaders discussing key events of the Cold War, such as the Cuban Missile Crisis. It is more likely they were not necessary in order to follow the lecture content and they were not helpful in the assessment tasks. Therefore, they were considered redundant.

Similarly, many other students felt, when reflecting on the textbook used for this subject, that this was a more useful learning tool than the course-book, as the articles and documents contained in it were "just random guys' opinions," and therefore not helpful in providing an understanding of the historical events. In contrast, another student commented that the textbook was an unnecessary expense as it "only gave background, which could have been looked up on Wikipedia or Google." Another student wrote that she was "not always sure what was necessary to know within [the] readings." These are clear examples of a surface learning approach where the student wants to be told what a particular article or book's purpose is for her own learning; what is it supposed to be teaching her, rather than what she can learn from it. Others state that they "learn best through discussion" rather than reading, or that it would be "more useful to have more lecture time than reading time." These students are clearly not making the connection between what they read and how this affects their ability to both synthesize lecture material and to contribute to the discussion. Comments of such a nature reflect a lack of general study skills within the first year cohort, and demonstrate the necessity of teaching students *how* to study and how to read texts in humanities subjects. It is not clear to some of these students what it is they should be gleaning from the reading material. While they are used to high school textbooks that tell them the facts, university-level study requires that they engage analytically with the material and respond to it.

These students are all essentially talking about the same problem – an inability to take an active role in their own learning. They are unable to read an article or a document and analyze it for what it says about the historical event. They need – or want – to be told outright. The student who stated that the background information given in the textbook was unnecessary – while at least demonstrating ability to research topics themselves – displays a lack of ability to distinguish

between credible and unreliable sources. Their opinions also reflect dissonance in how university lecturers and tutors conceptualize history – as a discourse that is continually changing – and how students perceive it – as the study of facts about the past (Booth, 2005). First year students can often become confused by the continual push to explore primary material and different viewpoints, when a textbook can present a summary of the facts without all the trouble.

All of this is, of course, to be expected in first year university students, and it is the role of universities to broaden students' learning approaches and to encourage them to think analytically, and thus we cannot expect these qualities to already exist in all first year students. The problem is that many universities tend to employ a "sink or swim" technique of teaching, and that assessment modes such as end-of-semester examinations often allow students to believe that surface level learning is the best way to approach their studies, particularly in large first year classes such as INT1010. And while more and more universities are including courses that teach study and research skills, or embedding such skills into their existing courses (Star & McDonald, 2007), we need to recognize that it is not simply a matter of teaching students how to use databases, but to approach learning itself from the students' perspective.

It should be emphasized that the approach of many of these students is not one of laziness, of necessarily wanting to be handed the answers on a silver platter so that they do not have to do the work necessary to find the answers for themselves. This is a common reaction by teachers, who feel that their students are apathetic to their own learning. It is, rather, a perception on the part of students that learners should be passive, not active (Star & McDonald, 2007). While the idea of the expert facilitating rather than directing student learning is an old one in teaching pedagogy (Vygotsky, 1978), many contemporary educators have found that the high school learning environment mimics that of the teacher-as-expert rather than the teacher-as-facilitator of knowledge (Booth, 2005; Star & McDonald, 2007). It is more of a case of the student not knowing how to take the driver's seat in their own learning, rather than an unwillingness to do so.

Developing New Learning Styles Through Assessment

The challenge in broad first year units is to encourage students to step away from the need to be told what to learn and what is important to know towards a more analytical, self-directed learning approach. Students need to be taught specifically how to adjust from a passive surface learning style to a more active deep learning style.

What our research has shown is that a useful way to support this is to use the approach students feel comfortable with to encourage independent thought. Because students feel more comfortable being told what to do, we designed the course so that we were taking advantage of their passive approach to tell them how to write essays again. By designing assessment tasks that teach them how to complete other assessment tasks more successfully, students are taught study and research skills and encouraged to begin engaging in independent learning.

Taylor (2008) writes that assessment is one of the most effective ways to encourage positive engagement with university study and to develop academic writing and research skills. Because students in undergraduate courses place assessment as the central measure of their performance, they tend to be strategic learners; that is, they focus on what tasks contribute towards their overall mark in the subject (Star & McDonald, 2007). They will put more effort into large assessment tasks than into general background reading to aid classroom discussion, as it is the assessment that contributes to their overall grades. Thus, we argue that the best way to teach students to develop a deep learning style, and to encourage them to engage in the subject is via assessment.

Assessment tasks should, according to Taylor (2008), be developed according to a three-step approach that allows for both the development of skills (formative assessment) and for the assessment of learning (summative assessment). Her model for assessment calls for three different phases: assessments for transition, development and achievement. Transition tasks should be low in weight and occur in the first few weeks of the semester. Development assignments are also low weight but allow for significant amounts of feedback to the student. Finally, achievement assessment provides little feedback but has a higher contribution to the final grade and occurs late in the semester. According to Taylor's (2008) model, development tasks allow students to gain feedback from their tutors and to develop assessment skills (formative assessment), while achievement tasks allow them to demonstrate what they have learnt and provide a means for the student and the lecturer to assess their performance (summative assessment). She argues that university units must cater towards both types of assessment in order for it to have the maximum value for students.

This model of assessment removes all the assumptions about students' skills. Lukeman (1992) argues that it is not that students do not know how to write essays, it is that they do not know how to write academic essays, where it is necessary to not only put forward opinions, but to support their stance with evidence. Part of the problem for new students is a lack

of understanding about terms such as "argument" and "evidence" within an academic environment. Many first year students see essay writing as an exercise in summarizing the topic, avoiding putting forth any solid opinion but instead outlining both sides of the argument. Lukeman thus recommends helping students to comprehend the language used frequently by lecturers and tutors with the assumption students are applying the same meaning.

Lupton (2008) writes of the need to not only consider the students' essay-writing skills, but also their information literacy. That is, considering how students "seek, locate, evaluate, select and organize information. It also involves using information to analyze, synthesize, create new knowledge, communicate, make decisions and problem solve" (Lupton, 2008, p. 399). So while university teachers can assume that students know how to write an essay, we cannot assume that their level of information literacy is consistent with each other or with the standard of academic level essays. Students may feel it is appropriate to locate and summarize facts in order to construct an essay, but do not know how to analyze or evaluate source material very well.

Star and McDonald (2007) and Taylor (2008) both describe the need for university teachers to utilize graduated assessment tasks that address both the development and presentation of writing and researching skills. This method involves structuring assessment in order to teach specific disciplinary and writing skills gradually, building up to more self-directed forms of assessment across the first semester or year.

The development of research and writing skills is a significant part of the process of transitioning from a surface-based learning style to a deeper approach. The skills required of deep learning – analysis, critical thinking and integration – cannot be achieved without first developing these skills. The criteria assessed in essays, such as good research, critical understanding of source material and the construction of a solid argument, are necessary in order to engage in deep level thinking, and therefore the two go hand in hand. At the first year level, it is most desirable to further these skills and encourage more active thinking through assessment.

It is this technique that we applied in our study. The students across INT1010 completed two written assignments. The first assignment, due in the forth week of the semester, consisted of an essay outline and an annotated bibliography, was designed to be developmental in nature. Students were required to select an essay topic, do some preliminary research and present an outline of their argument. They were also instructed to include a bibliography listing at least five references and to describe briefly how and why these

sources were useful. This task proved beneficial for students in several ways. Firstly, it forced students to begin thinking about their major essay early in the semester. Secondly, it allowed the students to get direct feedback from their tutor on the direction of their argument, as well as their research techniques. This meant that any student who did not have a firm grasp on the question they were writing on, or who, as Lukeman (1992) describes, did not fully understand the concepts involved in academic writing, would have the opportunity to work on these issues and to seek help from the tutor or the Faculty skills programs if necessary. This exercise allowed the tutor to encourage good research practices and to give assistance to those who needed it in constructing a valid academic argument.

The second written assignment was an achievement task (as was the end of semester exam). This assessment was the major essay that was begun in the first assignment. It was due in week nine, two weeks after the first assignment was returned. This allowed students to apply the feedback they received from the first assignment to their essay and to improve their argument and their research accordingly.

Comparing students' performance after the revised assessment tasks were introduced in 2009 makes for striking commentary on the effectiveness of Taylor's hypothesis of enhancing student engagement through formative and transitory assessment tasks.

The data collated in Table 2 shows two notable trends. Firstly, there is a clear increase in 2009 in the mean scores students received for each of their assessments compared to the 2008 figures. But more importantly, it is obvious that the emphasis on the importance of developing key learning skills and gently guiding students from a surface-based to a deeper learning style has had tangible results. Not only are the mean scores of both assignments higher in 2009 than in 2008 (and in the case of assignment two, significantly so), the means also indicate that the quality of students' work had improved from their first assessment task in 2009 to their second. In short, the careful and assisted build-up to their achievement task had resulted in better essays all around.

In addition to the two written assignments, the unit also used *signposting* assessment in the form of three in-class quizzes across the course of the semester that allowed students to gauge their knowledge while also encouraging them to engage with the course material. These tests were low in weight (totaling 5% of the total grade) but gave students an opportunity to revise what they had read and to test their own understanding. The first quiz involved a map exercise, conducted early on in the semester to familiarize students with political geography. Two further tests were conducted at five-week intervals. These were short multiple-choice tests

Table 2
Comparison of Mean Scores for Assessment Tasks, 2008 vs. 2009

Year	Mean score written assignment 1	Mean score written assignment 2	Number of students enrolled (all campuses)
2008	64.31	60.55	976
2009	66.88	68.45	1045

related to the assigned reading for each week, and the quizzes were designed to test students' understanding of the prescribed reading material.

Qualitative evidence from focus group sessions and the surveys conducted for this study revealed a close link between the effective use of signposting assessment and student engagement. Several students stated the usefulness of these quizzes as a learning tool, noting in particular that the frequency of the tests throughout the semester provided them with a "checkpoint" to assess how well they were doing in the unit. Others commented that by testing the students' knowledge of the assigned readings, we were encouraging more students to complete them by creating a broad learning structure made up of digestible sections of world history.

The effect of the signposting assessment is easy to underestimate. By creating identifiable milestones and highlights in the course, students became less intimidated by the sheer breadth of the survey course. This led to increased levels of student engagement in tutorials in particular, as more students found themselves confident in offering contributions to tutorial discussions, and demonstrates not only the ability of assessment to aid in the development of skills as a way to engage students, but also as a way to encourage students to develop study habits that are expected at university level – such as completing set readings in order to participate in class discussions – but that are not necessarily natural to first year students used to classroom-based, passive learning models.

Student attrition at the first year of university is one of the most powerful indicators of student disengagement. Most universities keep such data closely confidential, and so it is impossible for us to map out the exact figures of attrition in INT1010, let alone across courses, faculties, and universities. However, there is data that is both useful and available which can be used to indicate levels of attrition: rates of submission. The failure to submit assignments is a common occurrence in large first year survey units, and overwhelmingly when students do not submit their work at all, the broader reason can be traced to disengagement. Table 3 shows the collated submission rates for the two major written assessment tasks among students enrolled in INT1010 in 2008 and 2009.

Not only did a greater proportion of students successfully submit their written assignments after the changes to INT1010 were implemented in 2009, but there was also a noticeably tighter clustering of the submission rates for assessment one and assessment two that year, compared to 2008.

Finally, at the end of each semester students are invited to take part in an anonymous unit evaluations conducted by the university. The surveys are designed to generate quantitative data about the effectiveness of teaching in individual units, as well as the general levels of student satisfaction with the quality and structure of a given course. The evaluation scores based on student feedback again reinforce a positive trend favoring the changes to teaching and learning outlined earlier in this paper. Five of the relevant categories for evaluation have been selected, and are presented in Table 4.

Besides the significant increases in each category, of particular note are the students' responses to the question "In this unit I was encouraged to participate actively", which saw a remarkable increase of 0.17 in the mean. It is clear from the data that the changes had dramatically increased students' sense of engagement with the unit.

Conclusion

The use of formative, summative and signposted assessment techniques allowed us to combine the development of writing and research skills with tests of achievement within the unit. We have argued that by integrating assessment techniques that provide both developmental and skills-based feedback as well as tasks that signpost their performance and encouraging students to move beyond a surface learning approach enhanced the engagement of the students across the course towards the unit material. These skills are applicable to all disciplines at university level, and such assessment techniques can easily be utilized within other areas of study. The philosophy of structuring assessment around the acquisition of skills could be applied in any subject where the students' skill base is not at university level or where students are struggling to engage with the material. We have demonstrated that incorporating an understanding of how first year students learn into developing the assessment tasks allows us to help the students to acquire deeper learning skills, to apply them to their everyday learning and to

Table 3
Submission Rate of Written Assessment

Year	Written assessment 1 submission rate	Written assessment 2 submission rate	Number of students enrolled (all campuses)
2008	79.30%	74.60%	976
2009	85.10%	84.40%	1045

Table 4
Mean Scores from Unit Evaluation Reports, 2008 and 2009

Year	The learning objectives were made clear to me	The organization and progression of the topics in this unit made sense to me	The assessment tasks helped me develop relevant knowledge and skills	In this unit I was encouraged to participate actively	Overall I was satisfied with the quality of this unit
2008 (*n* = 599)	4.09	4.04	4.04	4.07	3.99
2009 (*n* = 428)	4.19	4.18	4.16	4.24	4.17

Note. Scale of 1-5, 1 being the worst and 5 being the best

their assessment tasks, as well as allowing them to develop a better understanding of the area of study.

By comparing qualitative and quantitative data between two iterations of a large first year survey course, INT1010, it is clear that the implementation of these teaching techniques reveal to us many things about ourselves as educators, and our students as learners. We have seen how first year university students in such courses can be guided away from surface learning to deeper learning styles, and how students can be gently coaxed into looking beyond utility when assessing readings and text. We have also seen how course designers of large first year survey units can accommodate the principles of student engagement in assessment design. By recognizing the importance of formative assessment in first year teaching, and by signposting the architecture of the learning material, the most pressing causes of student disengagement inherent to first year learners in survey units can be greatly alleviated.

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Acknowledgements

The Impact of Changes to Finance-Major Assessment Structures on Student Engagement and Success

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Analysis of assessment activities that encourage student engagement and attainment of higher-order cognitive outcomes within Bloom's Taxonomy (deep learning; Anderson & Krathwohl, 2001) supports greater use of individual and group presentations, research reports, and open-book exams. Consistent with this analysis this paper outlines changes made to the assessment structures of three final-year finance-major courses and details the impact on student engagement and success. It was found that the changed assessment structures were associated with enhanced student engagement, satisfaction and success. It was also found that the changes to the forms of assessment enhanced the development of students' verbal and written communication abilities and did not detract from the quantitative emphasis required of finance majors.

In the early 2000s the Applied Finance discipline at the University of South Australia responded to two major concerns regarding its finance major: student feedback evidencing low student satisfaction with final-year courses, and high student failure rates in these courses. Given both of these concerns, it was decided by the group that assessment would be the focal point for improving learning satisfaction and outcomes. To facilitate a review of the suitability of the assessment structures in each of the finance-major courses comprising the University's three-year undergraduate Bachelor of Applied Finance degree, funding was applied for and awarded under a University of South Australia Teaching and Learning Grant. The resulting modifications to assessment in the final-year finance major courses are part of the outcome associated with the grant report.

In keeping with the University's promotion of a student-centered perspective on teaching and learning, suitability was defined in terms of the potential impact on student learning outcomes and satisfaction rather than attempting to measure teaching effectiveness. This analysis of suitability required consideration of the "fitness for purpose" and the transformation qualities of different forms of assessment. Fitness for purpose defines quality strictly in relation to the purpose of the education service/teaching and learning materials.

First, a set of qualitative characteristics or benchmark criteria against which to make these judgments was established. This comprised: specifying the characteristics desired of finance graduates, based on survey evidence of the core concepts and skills required by employers and as specified by the University of South Australia's Graduate Qualities; and recognition that the concepts and skills required of finance majors may be linked to learning outcomes associated with specific levels of cognitive development within Bloom's Taxonomy (Anderson & Krathwohl, 2001). As well as having a firm grasp of application when learning undergraduate finance,

students are expected to engage mainly in the higher-order levels of Bloom's Taxonomy—analysis, evaluation, and synthesis (Anderson & Krathwohl, 2001). This supports a focus on teaching and learning arrangements, especially changing assessment structures to encourage a deep approach to learning by the student.

Second, evaluation of existing assessment structures was undertaken against these benchmarks. Third, a revised assessment structure displaying greater 'fitness for purpose' of assessment comprising changes to the coursework assignment and final exam format was selected. Finally, these changes to assessment were evaluated, based on student course evaluation scores and student success rates. The following sections of this paper provide a brief outline of this process.

Review of Assessment Structures

In determining the fitness for purpose of alternative assessment practices an institutional perspective was followed, with the objective of improving the fit with the requirements of associated institutions and interest groups (Ashcroft & Foreman-Peck, 1994). This included: requirements that were institution-specific, such as assisting in the development of the University of South Australia's Graduate Qualities; discipline-based requirements, reflecting accepted andragogical/pedagogical perspectives; and consistency with assessment practices specified by professional organizations and licensing bodies.

With respect to the transformation role of assessment, it was necessary to identify assessment alternatives that support student learning consistent with the achievement of higher-order educational outcomes such as those defined in Bloom's Taxonomy, cognitive domain (e.g., see Taylor, Goles, & Chin, 2002). The cognitive school's focus on the significance of the learner in the learning process (Curzon, 2000) provided a useful structure within which to consider

relevant aspects of university level assessment in finance-major courses. In addition, the cognitive school's focus on the learner, with recognition that student-centered learning may be actively applied and related to life experience (a common requirement of adult learners) (Smith, 1998), supported this preference.

Applying the above foci, the review of assessment required consideration of the following questions. What attributes/qualities should be developed by a finance-major graduate? What forms of assessment activity are best suited to the development of the cognitive abilities of finance-major students? Are the current assessment activities in the finance-major courses appropriate to the development of a graduate quality profile best suited to finance-major graduates?

An exploration of these questions (McIver, Lennox, Burrow, Nguyen, & Bredon, 2004) reflected on: alternative definitions of the discipline of finance and its methodology, including its relationship to microeconomics, mathematics and statistics; survey evidence on the core attributes that students generally need to acquire from the undergraduate finance major for future employment (see column one of Table 1); and the characteristics associated with student success in undergraduate finance courses, including the importance of mathematical/quantitative methods. This allowed the establishment of links between the knowledge, skills and attributes required of a finance-major graduate and the six University of South Australia Graduate Qualities (see columns one and two of Table 1), and the assessment structures that can best promote student engagement with activities that encourage deep learning.

Cognitive theories of learning imply that learner activities are a key component in course design and place substantial emphasis on interaction, particularly collaborative learning, as this requires an active role on the part of the learner. These approaches are thought to encourage the development of higher levels of educational outcome as defined within Bloom's Taxonomy (i.e., deep learning) (Hartley, 2000; Lyall & McNamara, 2000; Mazoué, 1999; Ramsden, 1992; Rosie, 2000; Smith, 1998; Wee & Chen, 2001). The cognitive school's approach supports forms of assessment embodying: learning by doing and the use of problem-based learning approaches; project work, including group reports; and case study approaches that provide realistic assessment tasks (McIver et al., 2004).

As problem-based learning includes assessment approaches that encourage active and long-term individual involvement with the learning environment (Spronken-Smith & Harland, 2009) it can be particularly useful in developing students' expertise with quantitative material of the type found in finance courses. Group work/projects encourage active participation by students in the learning process and

Table 1

Core Attributes of Finance-Major Graduates and Associated University of South Australia Graduate Qualities

Core attributes [a]	Graduate Quality [b]
Decision-making	(1) Operates effectively with and upon a body of knowledge sufficient to begin professional practice (3) Is an effective problem solver
Written communication	(6) Is an effective communicator
Computer literacy/skills	(1) Operates effectively with and upon a body of knowledge sufficient to begin professional practice (2) Is prepared for life-long learning
Oral communication	(6) Is an effective communicator
Mathematics/statistics	(1) Operates effectively with and upon a body of knowledge sufficient to begin professional practice (2) Is prepared for life-long learning
Interpersonal skills	(4) Can work as an individual or as a member of a group
Ethics	(5) A commitment to ethical action and social responsibility
Social etiquette	(4) Can work as an individual or as a member of a group

Note. [a] Ranking of graduate core attribute reflects views of finance faculty in Moore (2000), and the characteristics used in the survey-based papers of Collier and Wilson (1994), Graham and Krueger (1996), Baker and Phillips (2000), and Moore (2000). [b] The University of South Australia ascribed Graduate Quality numbers shown in brackets do not necessarily reflect a relative ranking of these graduate qualities. (McIver et al., 2004)

facilitate both teamwork and communication outcomes (Hartley, 2000; Ramsden, 1992). Finally, case studies may be designed so as to allow students to relate theory to practice and experience, requiring the student to provide evidence of the ability to engage in decision-making and communicate effectively (McIver et al., 2004). This can assist students to integrate both the theoretical and quantitative material common in the finance discipline.

The review of existing assessment structures matched each assessment activity against the desired graduate qualities profile and the forms of assessment that encourage deep learning. This identified that the existing assessment activities comprising coursework assignments and a closed-book final exam had a high quantitative component which was generally consistent with the development of the set of attributes desired of finance graduates and also with engaging students in deep learning.

However, also evident were significant deficiencies with the existing assessment activities. The limited use of individual and group presentations did not support the development of students' verbal communication skills and the quantitative emphasis of assignment tasks imposed a heavy reliance on the final examination to assess students' written communication skills. Also evident was insufficient emphasis given to ethical considerations in finance. These deficiencies are likely to limit the engagement of students in lifelong learning and inhibit their development of a long-term career in the finance sector.

Changes to Assessment Structures

The review of existing assessment structures identified that change was needed to ensure a better fit of assessment activities to the development of the attributes of finance graduates and to improve student performance (Greer, 2001). It was also evident that the assessment activities needed to be modified to achieve the objectives of enhancing student engagement, improving student communications skills, and encouraging students to develop a capacity to engage in lifelong learning.

The major modification made to the assessment structures was to reduce the quantitative emphasis in the coursework assignments and to increase this aspect in the final exam. In addition, the coursework assignment format was changed to be more heavily based on activities related to those likely to be undertaken in employment—"authentic assessment" (Svinicki, 2004; Wiggins, 1998). This includes industry-style applied group research reports, which give students the opportunity to demonstrate their integration of the set of knowledge, skills and analytic capacities required of the discipline (Cox & Harper, 2000).

The presence of group assessment, and collaborative learning based on teams, was seen as important to encourage those higher levels of educational outcome defined within Bloom's Taxonomy (Mazoué, 1999; Wee & Chen, 2001). For example, case studies were designed to allow students to relate theory to practice and experience by requiring students to provide evidence of their ability to engage in decision-making and effectively communicate both theoretical and quantitative material. As this less time-constrained form of assessment encourages group activity and active student participation in the learning process facilitating both teamwork and communication outcomes, it supports the development of the skills suited to lifelong learning, a key area for finance-major graduates.

To overcome problems associated with the need to move assessment of the more technical/quantitative aspects of the course content from assignments to the final exam, an open-book exam format was adopted. By giving access to text and reference material to complete exam questions, this format reinforces in students the recognition that finance professionals engaged in effective problem solving need to be familiar with and utilize a range of resources. The open-book exam format also overcomes some of the limitations that a closed-book format imposes on students to memorize and apply the large quantities of formulae and mathematical models common to finance courses and also allows more complex examination questions to be set than is possible under a closed-book examination format (Habeshaw, Gibbs, & Habeshaw, 1993).

As students are precluded from receiving outside assistance in the preparation of their exam answers, the open-book format is able to provide evidence of each student's development of the graduate qualities specified for a finance-major, ensure a credentialing role in assessment (Habeshaw et al., 1993), and is consistent with the accreditation practices of professional bodies associated with the finance industry. Finally, the use of open-book exams can encourage students to develop a course portfolio as both a learning resource and as a reference source for the final exam and beyond the end of the course.

To facilitate implementation and evaluation, the modified assessment structure as detailed above was adopted in the three final-year courses of the finance-major. For two established courses—Investment Banking and Project Finance (IBPF) and Portfolio and Fund Management (PFM) —this involved changing existing assessment structures. For a third course—Financial Risk Analysis (FRA)—offered for the first time during the semester, the modified assessment structure was implemented from its inception.

Impact of Changes to Assessment Structures

Evaluation of the impact of changes to the assessment structures of the three final-year finance-major courses was primarily based on a range of student performance and satisfaction indicators. A summary of these indicators for each of the courses between 1999 and 2009 is provided in Table 2.

From a comparison of the indicators in Table 2 it is reasonable to conclude that the modified assessment structure had a positive impact on both student performance and student satisfaction. Prior to the introduction of the coursework research/industry style group assignments and the open-book exam format, course failure rates were relatively high for end-of-degree courses (e.g., 33% for IBPF in 1999 and 34% for PFM in 2004). Following the introduction of the modified assessment structure, the failure rate in both these courses fell significantly (e.g., 14% for IBPF in 2007 and 16% for PFM in 2008). Since the introduction of FRA with the modified assessment structure student failure rates have been 10% or less.

The impact of the changed assessment structures has, perhaps, been more significant on student satisfaction as reflected in the comparative scores of student responses to the University of South Australia Course Evaluation Instrument (CEI) Question 10 (overall satisfaction with the quality of the course). For example, following the introduction of changes to assessment in IBPF in 2006, the score on CEI Question 10 increased significantly, moving from the second lowest quartile into the top quartile. A similar improvement occurred for PFM with the score moving from the bottom quartile to the second highest quartile and for FRA the score has been fairly consistently in the top quartile since the introduction of the course.

There was also evidence that the students had a more positive view of the relationship between the modified assessment structure and their development of the Qualities of a University of South Graduate. Following the introduction of the modified assessment structures in 2006, there was a significant improvement in the student scores relative to other courses in the Management and Commerce area for the CEI Question 8 (assessment related to graduate qualities). For IBPF the score moved from the second bottom quartile to near the top of the highest quartile and for PFM the shift was from the bottom to the second top quartile.

From a course coordinator perspective, the modifications to assessment practice produced a number of benefits including: the management of student expectations, students taking more responsibility for their learning outcomes, improvements in course progression rates, student perceptions regarding their learning outcomes and overall student satisfaction with the course.

In addition to the lower failure rates reported in Table 2, the modified assessment structure resulted in the final grades of each student cohort being more evenly spread and a greater proportion of students obtaining a final grade that was consistent with their expectations. An explanation for this outcome is that as opposed to the previous narrowly focused quantitative format, the more complex nature of the group assignment component of the modified assessment structure enabled students to draw on a wider range of skills, knowledge and practical experiences in completing the assessment. Further support is provided by some students reporting that being encouraged to develop a course portfolio from their assignment work together with the open-book final exam format helped them to recognize, and be more likely to take on, responsibility for the success or failure of their learning outcomes.

Table 2
Indicators of Student Performance and Satisfaction [a]

	Previous Assessment Structure	Modified Assessment Structure
Student Performance (failure rate %)	IBPF – 24-33% PFM – 26-34% FRA – n.a.	IBPF – 14-16% PFM – 16-18% FRA – 10%.
Student Satisfaction[b]	IBPF – 2nd lowest quartile PFM – Lowest quartile FRA[c] – n.a.	IBPF – top quartile PFM – 2nd highest quartile FRA – top quartile

Note. [a] Only includes course offering where the co-authors co-ordinated and determined the assessment. [b] Student satisfaction reflects student responses to the University of South Australia Course Evaluation Instrument Question 10 (overall satisfaction). The quartile representation is based on the average Likert score for responses to the question relative to scores of other courses in the Management and Commerce area. Thus, a "lowest quartile" result indicates a relative rating of student satisfaction for the course in the lowest 25% of all courses offered in Management and Commerce. [c] Revised assessment structure applied from the first offering of Financial Risk Analysis (FRA).

Support for the positive impact of the open-book exam format on student satisfaction comes from reduced numbers of student complaints regarding their perception of the fairness and topic coverage of the final exam questions. Furthermore, the course coordinators reported that the student complaints that did occur were able to be better resolved through reference to the association of exam questions with the course structure, references, and teaching and learning resources (e.g., tutorial content).

Conclusion

This paper outlines the process and benefits of using reflective practice in determining whether, where and how to change assessment practice, and its effectiveness. Both in application and evaluation, efforts outlined to improve the fitness for purpose and transformation qualities of assessment in the final-year finance-major courses at the University of South Australia appear to have been successful. This was achieved by making significant changes to the nature and emphasis of both coursework and examination assessment in these courses. A major component was moving the quantitative emphasis of assessment from assignments to the final exam, the adoption of research-based group assignments and the introduction of an open-book exam format. Evidence of improvements to student evaluations and performance, indicating greater student engagement, support these changes. Given these findings it is expected that a similar review and change of assessment structures would be beneficial for the outcomes and engagement of students in other disciplines, including the related disciplines of economics and accountancy.

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Teaching International Relations to a Multicultural Classroom

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This article argues that instructors should adopt a more multicultural perspective when designing syllabi for and teaching undergraduate courses in International Relations (IR). The examination of teaching practices in IR draws on the personal experiences of the authors as foreign natives and instructors of IR at two American universities. The authors examine whether instructors face different challenges when teaching IR to American and foreign undergraduates, and identify the pedagogical challenges of teaching multicultural, globalized and networked students. Suggestions for improving flexibility and balance in IR curricula are provided. In addition, the paper suggests that IR instructors need to be aware of language and cultural barriers in their classrooms, and of differences in students' understanding of world events and history. The recommendations in this paper for dealing with potential western/American biases in courses might also be of interest to instructors of other subjects.

This paper draws on the authors' experiences as foreign natives who trained in International Relations (IR) and subsequently taught undergraduate courses in IR at American universities. We ask whether there are differences between teaching IR to American and foreign undergraduates, and identify the pedagogical challenges of teaching multicultural, globalized and networked students. We argue for a measured balance in IR curricula—while it is useful to include certain "core" themes, concepts, readings and historical case studies in the syllabi of core IR classes, an instructor of IR in the 21st century must consider the range of and at times divergent interests and questions that students of various backgrounds bring to the classroom. In IR classes, the variation in students' broad research interests and questions is likely to be correlated with the type of pre-university education they received in world history and the type of political system in which they grew up (which in turn forms the basis of their perceptions about key actors and ideas in international politics).

From a pedagogical point of view, we suggest that instructors of IR allow for sufficient flexibility in their syllabi to accommodate varying interests in a globalized classroom, notwithstanding the need for a set of "core" ideas and reading canon that should ideally be transmitted to young political science scholars. As natives of foreign countries, we acknowledge and emphasize the need to be aware of and to try and bridge language and cultural barriers and differences in the level of students' understanding of world events and history.

The Introductory IR Syllabus in American Universities

Other scholars have noted that the teaching of IR and IR syllabi in American universities are geared toward an American audience, and focus mainly on American theories and theorists. Critiquing IR as a discipline, Tickner (2003) points out "the lack of correspondence between standard IR terminology, categories and theories, and third world realities, and the examination of national and regional IR perspectives outside the core" (p. 296). Tickner further notes that "IR teaching, notwithstanding repetitive calls for cosmopolitanism, remains essentially parochial, not only in the US but in many other parts of the world as well" (2003, p. 298). Writing from a U.K. perspective, Smith (2002) asserts that "mainstream U.S. IR defines the appropriate methods of how to study international relations in such a narrow way as to restrict understanding of other cultures and rationalities" (p. 67).

It is worthwhile revisiting the critique of IR syllabi in today's globalized classroom and university, to investigate whether IR instructors are preparing their students sufficiently for the world in which they live. The following observations may not be applicable to all IR course syllabi, but are probably reflective of the typical Government/Political Science Introduction to IR courses in many universities in the United States. Each professor has some leeway to customize her syllabus, but most instructors will recognize and acknowledge explicitly to students and colleagues that there appears to be a core "canon" of IR theories that each instructor must teach.

In a typical American classroom, a professor would teach an introductory class in IR by introducing in chronological order the main theories of classical Realism and Neorealism, followed by Liberal Institutionalism, and then constructivism. Most of the historical references used to illustrate and support these theories would be Western or Euro-centric events, wars and personalities, starting with the Peloponnesian War and Thucydides, and moving through the course of Western (i.e., European and North American) history to the Cold War, possibly touching on proxy wars such as the Korean War and Vietnam War, and ending with the

global "war on terrorism." Except for issues like the rise of China and transnational Islamist terrorism, a large part of the typical Introduction to IR course will focus almost exclusively on how particular theories arose from scholars deliberating the great Western wars, the primacy of great (Western) powers, and the maintenance or possible decline of the US's status as the sole superpower in the 21st century.

In introductory IR syllabi, prominent IR scholars based in North America, such as Kenneth N. Waltz, Stephen Walt, John Mearsheimer, Robert Keohane, and Martha Finnemore, are often the main thinkers cited. There is likely little or no mention of European, Latin American, or Asian IR theorists, or of work done outside American academia in IR theorizing in either the syllabus or the classroom. Robles (1993), writing from his personal experience as a non-American IR instructor in the United States, has used textbooks written by Norwegian and Australian authors, and assigned readings by European and Middle Eastern writers. Another way to incorporate diversity in the syllabus would be to discuss empirical examples drawing from the histories of countries other than those in Western Europe and North America.

An argument against including additional details and citing foreign scholars would be that this is unnecessary for undergraduate students taking an introductory IR course in the US. We would argue the opposite: even introductory courses in political science should prepare students for the world they currently live in, and the reality that North American thinking on IR is but one strand among several schools of thinking that exist in the scholarly realm. Furthermore, if classrooms are increasingly globalized in that students hail from different countries, instructors should adapt their pedagogy and syllabi, including core or introductory syllabi, to better reflect students' needs and interests.

Our experiences in teaching IR first as teaching assistants, then as instructors, brought into sharper relief the various tensions and challenges that foreign students might face in an American classroom. From conversations with students from Mexico and elsewhere, and student responses in informal surveys, we gleaned that foreign students dealt with different challenges from their American counterparts when taking an introductory IR course. In order not to alienate these students, and to ensure their academic success notwithstanding language barriers and other concerns, we had to adapt to their needs while bearing in mind that we could not stray too far from the syllabus. We also had to teach a class that would remain useful and relevant to North American students.

The teaching and learning of IR theory at the undergraduate level in North American universities is naturally influenced by the fact that most students taking courses in IR will be Americans or foreign

students with significant exposure to American culture and thinking, and by current realities on the international stage. We need to be mindful that foreign students in US classrooms might find a US-centric IR syllabus less useful and interesting. On their part, American students might be learning in a manner that is unhelpful to them in a globalized world, where multiculturalism and exposure to different viewpoints would be assets, rather than liabilities.

Diversity in the Classroom

In this section, we deal with the challenges of teaching IR in a diverse classroom, in which more than half of the students may be foreign nationals. While there appears to be considerable recognition amongst American teachers at the high school level of the need to be culturally aware in a multicultural classroom, there seems to be less focus on the need to tailor undergraduate syllabi and teaching methods to a multicultural university-level student body. Gay (2010), writing about high school teaching, reminds us that "culture is at the heart of all we do . . ." in education, and that culture ". . . determines how we think, believe, and behave, and these, in turn, affect how we teach and learn" (p. 8-9).

The point about "culture" being a powerful filter through which "we think, believe, and behave" and that it affects "how we teach and learn" deserves further scrutiny when we think about teaching IR to foreign students. First, a growing number of IR scholars have pointed out that the field itself is not so very *international*. Hoffman (1977) kicked off the debate with his seminal article, which argued that it was in the United States where IR became a discipline within political science. While Hoffman (1977) acknowledged that foreign-born scholars had contributed to the discipline, he contended that the predominant doctrines within IR remained American ones. In the decades since then, American, European and Asian scholars alike have noted how American theories, scholars and ideas continue to dominate the field of IR, leaving little room for influences from other countries and regions (Crawford & Jarvis, 2001; Kang, 2003; Qin, 2007; Smith, 2002; Wæver, 1998). Indeed, IR theorizing is famously Euro-American-centric, as scholars have built theories based on the recurring dynamics of European historical events such as the two World Wars, the Peloponnesian War, or the Concert of Europe. Second, the fact that the field is primarily interested in understanding only politics amongst great powers has left very little room for the study of small states' behavior. This could pose a challenge to instructors who teach IR to foreign students who do not come from countries that are considered great powers, because it can limit the range of socio-political realities to which the students can relate.

These two characteristics of IR pose at least two very subtle but real challenges for those teaching IR to foreign students. The first challenge is linked to the question of national identity and how identity often is a powerful mental framework through which individuals analyze issues and make judgments on what they learn and what they should do to address problems. Studying IR is about studying relations between nations, and teachers and students may find themselves carrying their awareness of who they are in terms of national identity, knowingly or unknowingly, into classroom discussions. Understanding the dynamics of relations between states cannot be thought of without first invoking the concept of *national interest*, and this could potentially highlight students' national origins by asking whose national interest a particular strategy or foreign policy serves. In a seminar setting where students were encouraged to freely debate about how the US should deal with China's rise, for example, we noticed that the presence of Chinese students in the classroom sometimes changed the tone of the debate, as there is a cognitive identification of China with Chinese students.

The question of identity is perhaps most acute when we teach issues of national security. Major IR theories tend to regard states as major actors in international politics, and the study of inter-state relations can often be dry and impersonal, with little regard for human emotions or the human being as a unit of analysis. Some of the language that is used in IR, particularly in security studies, reflects this tendency— civilian casualties in war or from nuclear explosions are termed "collateral damage," for instance. When value-laden terms such as "target," "threat," "adversary" or "rogue state" are used to indicate particular countries, it is possible that they can generate tension or cause offence in the minds of students whose national identity is related to those countries.

The above observations are subtle, but we have experienced that individuals' national identities compel us to think harder about where the pedagogical wisdom lies when it comes to encouraging respect for foreign cultures and different national interests while teaching the seemingly "objective" facts and theories of international politics.

Another challenge is to make the theories and topics in IR more relevant to what students "think, believe and behave." In addition to cultural differences and barriers, foreign students often have difficulty comprehending assigned readings. Their diverse educational and cultural backgrounds often mean that they have different concerns and research interests, compared to their American counterparts.

For example, while balance of power theory is regarded as one of the most prominent theories in IR in light of the diplomatic history of Europe, it is possible that students from non-European and non-North American countries might find this theory less appealing given their own countries' diplomatic history. For them, theories remain as theories, and this may reduce their interest in the lesson. It is worth considering that many foreign students are from countries whose national resources and power do not command significant attention in the field of international politics. Instructors would want to develop an IR curriculum that is useful and interesting to these students, regardless of their national origin.

To create challenging syllabi that speak to our students, it is essential to listen to their feedback on how IR is taught and what is taught. It may be important to switch topics or alter our focus where possible, to add interest or address curiosity, in order to sustain our students' attention. Several of our foreign students have noted that in their IR syllabus, limited attention is paid to institutions such as the United Nations, the significance of (or lack of) regional institutions such as the Organization of American States (OAS) and the Association for Southeast Asian Nations (ASEAN), even though there is some mention of the European Union when the class discussed topics like International Political Economy and Liberal Institutionalism. There are practical ways to deal with this challenge. For one class, for example, students voted on what topics the class would study for their last two class sessions. They decided on human rights, and human security in Africa, topics which rarely make the list in more conventional introductory IR classes. Students from Latin America were more interested in Institutionalism and constructivism compared to their American counterparts, who seemed more attracted to Realist theories.

Teaching the Networked Generation

Tapscott (2009) points out that given anyone's ability to check factual information and acquire "knowledge" online, and the typical scenario of how young people aged 25 and below are likely to outshine their older colleagues and even their professors in their knowledge of all things technological and involving the Internet, "for the first time ever, in one domain, the students will be the teachers and the teachers will be the students" (p. 29). Tapscott (2009) then describes how these students will become knowledge workers in businesses and companies, and highlights how "the successful companies will be those that recognize that networked structures work more effectively than old-fashioned hierarchies" (p. 29). He also notes how "peer collaboration drives innovation and new approaches to management and government" (Tapscott, 2009, p. 29)

We believe that Tapscott's insights into the power of online collaboration and the democratization of

knowledge acquisition and access in today's networked world are applicable to academia. They strongly support our intuitive thoughts on the need for constant revision and creative thinking about the teaching and pedagogy of a core course such as Introduction to International Relations to undergraduates. Students from our classes are used to a rigorous and collaborative existence using Gmail, Gchat, Facebook, YouTube, Dropbox and other file-sharing or online interfaces with their peers on class projects (where group work is mandated or allowed) in a way that most instructors have not experienced even in graduate school and certainly not when we were undergraduates ourselves. Often, the product of such collaboration is creative, informative, and of an impressive caliber. The value of such collaboration is that the students in using these interfaces subliminally absorb the concepts and ideas taught in class, as they have to re-invent and re-interpret the concepts and ideas in order to present them to the instructor and to their classmates.

Among Tapscott's most useful insights is that "for anyone wanting to reach this age group, the best strategy is candor" (2009, p. 81). He suggests providing "Net Geners with ample product information that is easy to access" (Tapscott, 2009, p. 81). Young people would then decide whether they would purchase the product. Arguably, students similarly "shop" for courses, and instructors should be cognizant of the need to provide product information in the form of an up-to-date, relevant syllabus for the course they are teaching. The point on candor reminds us that students can tell when we are not being truthful instructors. Acknowledging the variety of thinking and scholarship on IR beyond American academia, for instance, would increase the level of respect for diversity in the classroom, especially for foreign students. The following section expands on our assessment of how best to think from the perspective of "the other"—in this case that of foreign students in American universities—to deepen the multicultural aspect of the classroom experience. We provide ideas on how to improve the relevance of existing syllabi, and acknowledge the role our students can play in shaping the lessons they learn in class.

Accommodating Different Student Interests in IR

We suggest that instructors of IR allow for flexibility in their introductory syllabi to accommodate the different interests of their students in a globalized world and classroom, notwithstanding the need for a "basic" or "core" set of ideas on IR they must transmit to their students. These approaches are likely to benefit not only foreign students but also American students. It is possible to deal with this challenge in the following ways:

1. Choice: Where possible and within limits, allowing students to choose the topics the class will study, especially if the class is discussing current topics in IR.
2. Connectivity: Instructors of courses have the option to use software packages such as Blackboard, which connect instructors, teaching assistants, and students online and allow users to share files, download reading and other material, blog, take online tests and assignments, and collaborate without meeting face-to-face. Given advances in social networking technology, applications such as *Google Docs* and *Facebook* are even more user-friendly and useable in the classroom context. In addition, we recommend sharing with students via regular e-mail updates, which contain useful and interesting links to websites and online archives to aid their research or prompt them to do further reading on particular topics.
3. Challenge: Students respond well when challenged to think about how to make the class and syllabus more relevant to their needs and academic interests.

Accommodating Differences in Language Proficiency, Prior Knowledge, and Cultures

More pragmatically, instructors need to be aware and conscious of language barriers and differences in students' level of understanding of world events in a culturally diverse classroom. Gay (2010) defines "culturally responsive teaching" as "using the cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them" (p. 31). It is worthwhile making the extra effort to know a little about each student's background, and his or her particular learning challenges, and to check each student's weaknesses or gaps in prior knowledge where IR or world affairs are concerned. It is of course impossible to do this for a large class of 100 or more, in a typical fall or spring semester introductory IR course. However, where the opportunity presents itself, it is possible to reduce students' concerns and doubts regarding the coursework by acknowledging and understanding their challenges and cultural differences.

Dilg (2003) reminds us that "we need to construct our courses, design our reading lists, and make choices regarding pedagogy in ways that acknowledge the complexity of identity and identity development in a multicultural society" (p. 88). Where necessary, we suggest that it is possible to adapt one's syllabus and teaching style in the following ways.

Diversifying Academic References/Resources

Where possible and where it makes sense, the instructor can include foreign language references to certain articles and documents, especially where material is available online. A good example is the Universal Declaration of Human Rights (the UN website has official versions in various languages).

Being able to read a complex document relevant to one's IR course in one's native language arguably makes one a more confident student, as one can appreciate better the nuances in that document. Foreign students can then supplement their knowledge with or compare the document in their native tongue with the English version. American students who are fluent in a second language and who are up for the challenge can also look at foreign language documents to supplement their learning, if they are willing and able to do so.

Developing Grading Rubrics and Students' Writing Skills

Hardt (2010) points out the advantages of using grading rubrics, saying that, "Rubrics make grading easier for professors because standard comments can be pre-typed as explicit criteria and/or written as checkmarks and circles over pre-written comments" (p. 10). In particular, by setting clear standards for students, rubrics help professors "be more fair and accurate with their grading," and "make grading complex assignments much easier" (Hardt, 2010, p. 10).

We suggest that a grading rubric is useful not only for capstone courses, but also introductory courses. In a diverse classroom, such a grading rubric makes clear the instructor's expectations of each student, and leaves less room for ambiguity.

Demystifying Presentations Where Possible

For example, some students find it challenging to complete assigned readings and to understand complex concepts and theories such as constructivism. For the instructor, going through lecture slides to reduce verbiage and/or simplify the language used, to increase the level of clarity without sacrificing content, is one way to clarify her message. The instructor can ask students to approach or to speak up if they encounter terms with which they are unfamiliar or find difficult to grasp.

In addition to the language barrier, foreign students are likely to be much less familiar than their American counterparts with the historical details of the two World Wars, not to mention the Peloponnesian War. Sachleben (2010) notes this phenomenon of a lack of prior knowledge even among American students:

For smaller and medium sized regional universities overcoming parochial ideas and preconceptions about the "other," especially in relation to topics and people that are international, becomes a significant challenge. Most international relations classes begin with the assumption that students have the necessary tools to engage and appreciate theoretical debates. Often students are only vaguely aware of the realities of the international system. (p. 2)

For an introductory IR course, the discussion of key world events drives much of the basic understanding of core concepts and theorizing. It is thus important for instructors to make up for any gaps in students' knowledge quickly and effectively. To some extent, this can be done by providing students who want the additional information with references to more articles, books and online reference material on the various wars that the class will cover in the Realism portion of the course.

Conclusion

Through this paper, we join an informed conversation with American and international colleagues on how professors might teach IR more effectively in a globalized, culturally-diversified classroom. Although the nature of the field itself, ironically enough, tends to make the task of internationalizing the curriculum more challenging, we believe it is possible to be engaged, culturally aware, and sensitive instructors. Being such instructors would enhance our students' learning of certain subjects, including IR. Instructors would benefit by being innovative and mindful of challenges in their pedagogical approaches and teaching methods. The practical insights derived from our teaching experiences are likely to resonate with broader challenges that the professoriate in North America and elsewhere teaching IR at the undergraduate level are facing:

- Internet-savvy students who are constantly connected to their friends, family and community online, and who are used to working collaboratively via the Internet, and who might thus view traditional teaching aids and paper textbooks as outdated;
- A diverse classroom where some of the students may not be native speakers of English or may not be proficient in academic English. Students may not possess what instructors too often assume, sometimes erroneously, to be "common" prior knowledge regarding world events relevant to IR, such as the two World Wars, the Cold War; and
- The rapidly evolving set of what is deemed to be "current challenges" and issues in IR.

Potential topics for study include the foreign policies of emerging markets including in Latin America and Asia, human security concerns, human rights, and transnational crime. These issues have not been a traditional focus in basic IR classes, and instructors may neglect to pay particular attention in updating their syllabi with resources and new scholarship on the issues in which today's students are interested.

The above discussion is not an attempt to suggest that professors should try to be all things to all students, nor to insist that all core course syllabi be drastically revised to meet the needs of today's diverse student body. But we believe that there is an urgent need for professors in US colleges to be cognizant of the challenges that certain students might face. These are heightened especially when students are from a foreign country with different cultural backgrounds and national identities, if they are not native speakers of English, or if they have not had the same exposure as local students to Western history prior to taking an introductory IR class. We acknowledge the core canon of IR theories and concepts that must be taught to each introductory undergraduate class, but argue the considered use of new examples and current issues to keep alive students' interest in the subject of International Relations, and to succeed as instructors in a multicultural, globalized classroom.

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