

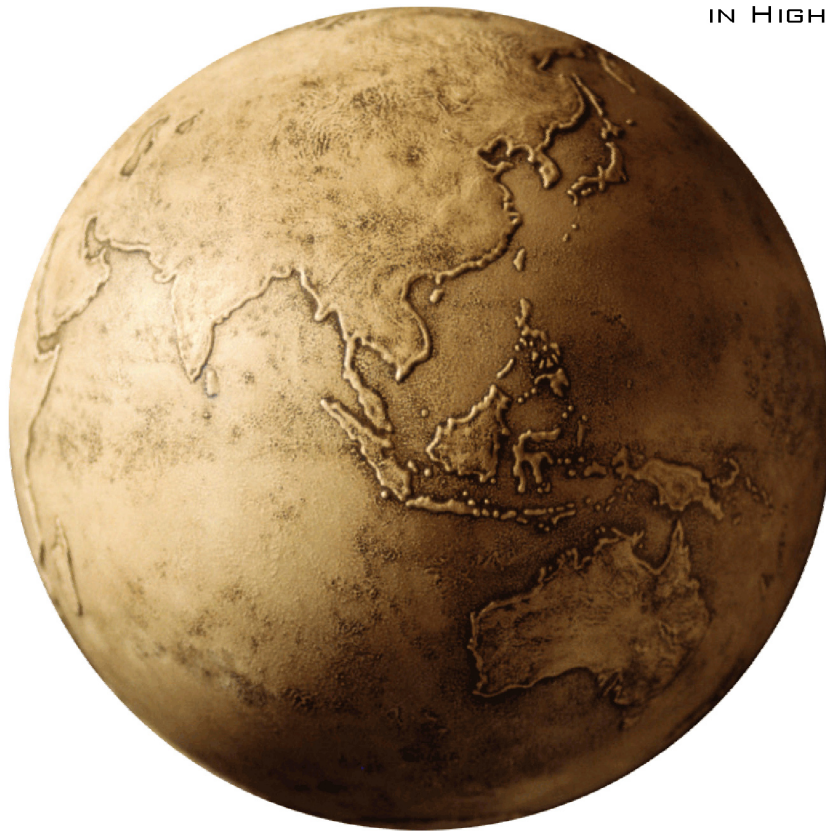
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The International Journal of Teaching and Learning in Higher Education (ISSN 1812-9129) provides a forum for the dissemination of knowledge focused on the improvement of higher education across all content areas and delivery domains. The audience of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

Submissions

The focus of the International Journal of Teaching and Learning in 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).

Review Process

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

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The International Journal of Teaching and Learning in Higher Education (ISSN 1812-9129) is an online publication of the International Society for Exploring Teaching and Learning, the Center for Instructional Development and Educational Research at Virginia Tech, and the Center for Teaching and Learning at the University of Georgia. The present hard copy of the journal contents is for reference only.

Preparing Students for Higher Education: The Role of Proactivity

Susan Geertshuis, Moon Jung, and Helena Cooper-Thomas

University of Auckland

Proactivity is important to individual success, particularly where individuals face significant obstacles and where formal support may be lacking or difficult to access. The study tracks mature students over a one-semester university preparation course designed for returners to learning. Measures of proactivity included proactive personality, confidence to perform proactive learning behaviors and frequency of proactive behaviors. While measures of proactive personality remained relatively stable, we observed increases in both confidence to perform and the frequency of proactive behaviors over time. At the end of semester these three variables were predictive of a number of outcomes including self-assessed self-directed learning, the taking of a mastery approach to learning, and grades. We argue that issues of proactivity are under-researched in higher education. The implications for course structure and student support are discussed.

The transition between school or work and the university presents social, cultural, and academic challenges for which students may be ill-prepared (Lowe & Cook, 2003). The literature documents adaptation to the demands of university life in terms of institutional impact such as retention (Tinto, 1987), dropout (Bennett, 2003), and examination failure (Saenz, Marcoulides, Junn, & Young, 1999), but there are also poignant consequences for the individuals involved which include: apathy and detachment (Johnston, 1994), distress (Laanan, 2001), depression (Poyrazli, Arbona, Bullington, & Pisecco, 2001), and sometimes even physical consequences such as headaches (Poyrazli et al., 2001).

Universities offer induction sessions for students on admittance, and some higher education institutions offer preparation courses, usually for those who do not meet university entry requirements. These sessions and courses are designed to better prepare students for the university and avoid the negative institutional and personal consequences of failures to transition. Underpinning and informing the design of these sessions and courses is the notion that many students are not well equipped to meet the expectations that universities have of their learners (Bettinger & Long, 2005). In particular, the contrast between school education in which students are more passive and university education where students must be proactive, as well as willing and able to self-manage and take initiative is seen as a major difference (Conley, 2007). If improvements are to be made to current outcomes, the factors predicting transition and early academic success need to be understood.

Initiative taking and proactivity have been shown to be important predictors of success in the world of work generally (Parker, 1998) and for newcomers to organizations in particular (Cooper-Thomas, Anderson, & Cash, 2011). We draw upon both the educational and the organizational studies literatures in designing this study in which we monitor proactivity over the course

of a one semester, 13-week university preparation course. We assess whether proactivity levels build over time and whether proactivity is predictive of success. In the sections that follow we define proactivity and examine its conceptions as a personality trait and as a skill or context dependent behavior. We relate this literature to the preparation of students for university. We then briefly review the associations between proactivity and success, introduce three measures of course outcome and review the links between proactivity and these course outcomes.

Proactive Personality

Proactivity has become a major theme within organizational psychology but has received very little explicit attention within higher education research. The notion of a proactive personality trait was developed by (Bateman & Crant, 1993). They suggest that individuals high in proactivity actively search and take advantage of different opportunities, display initiative, take action and persevere until their goals are reached (Bateman & Crant, 1993). They are motivated and dedicated to make an impact on the people around them. In contrast, individuals low on proactivity are passive, show little initiative and rely on others for change (Crant, 2000). The assertion is that these proactive characteristic traits are stable, dispositional, and inherent (Grant & Ashford, 2008). Support of proactivity as a stable disposition is drawn from studies that relate proactivity to other personality characteristics (Tornau & Frese, 2012) and studies that monitor proactive personality measures or behavioral observations over time (Buss & Craik, 1980). In our study, and consistent with Bateman and Crant (1993)'s theory and findings, we measure proactive personality and hypothesize that our student's proactive personality scores will remain stable over time:

- Hypothesis 1: Proactive personality scores will be stable over time.

Proactive Behavior

Proactive personality has been consistently associated with a number of proactive behaviors which all reflect initiative taking (e.g., Crant, 2000; Seibert, Kraimer, & Crant, 2001). They include networking, feedback seeking and general socializing (Ashford & Black, 1996). Within an educational context little research is available, but it has been proposed that students with higher proactive personalities enroll early, network with successful students and keep up with their schoolwork (Kirby & Kirby, 2006). In replication of previous studies we predict that proactive personality will be positively associated with proactive behaviors:

- Hypothesis 2: Proactive personality will be positively associated with proactive behaviors

Some issue has been taken with the notion of proactive personality as the principle determinant of proactive behaviors. Workers have noted the impact of the environment which may interact with or serve to elicit or suppress proactive behaviors (Bandura, 2001). These workers argue that context and situation may influence behavior either directly or working through attitudes or orientations (Fay & Frese, 2001). Still other workers have taken issue with the notion of proactivity as a stable measure and report that it is amenable to change through training, experience, or the way tasks are structured (Parker, Williams, & Turner, 2006) and that it is associated with well-being (Geertshuis, Jung, & Cooper-Thomas, 2013). Within an educational context, Kirby, Kirby, and Lewis (2002) demonstrated that not only did proactive thinking have a significant impact on academic performance, but measures of proactive personality significantly increased for students who received training in proactive thinking skills.

Parker, Bindl, and Strauss (2010) argued that different motivational states influence whether individuals perform proactive behaviors or not. They outlined three motivational states, one of which they summarized as “can do” which refers to perceptions of efficacy. They argued that, if an individual is confident that he or she can commit to a proactive behavior, then he or she is more likely to do so (Parker et al., 2010). Gruman, Saks, and Zweig (2006) and Wu and Parker (2012) found that measures of self-efficacy in new recruits were predictive of whether they would engage in proactive behaviors. In replication and extension of these studies we therefore predict the following:

- Hypothesis 3: Confidence to perform proactive behaviors will be positively associated with proactive behavior.

Previous researchers have monitored the incidence of proactive behaviors over time (e.g., Kim, Hon, & Crant, 2009; Seibert et al., 2001). Within the context of a program designed to develop academic skills and confidence one might expect that both self-confidence and efficacy and, in turn, the incidence of proactive behaviors would increase over time. Within organizational studies there is limited support for this notion; in studies of newcomers to organizations the frequency of proactive behaviors has been seen to stabilize or even decrease shortly after employment commences (Chan & Schmitt, 2000; Cooper-Thomas & Burke, 2012). It may be that once a new recruit is able to perform their role, the very pressing needs to proactively make contacts and find things out will fade. However, it may also be that the costs of behaving proactively increase, perhaps due to a lack of explicit permission for proactive behavior or due to concerns about how others will interpret proactive behaviors such as seeking help (Ashford, 1986; Cooper-Thomas & Wilson, 2011). In our study we selected study related proactive behaviors that should remain relevant throughout the semester long course. Therefore we predict the following:

- Hypothesis 4: Confidence to perform proactive behaviors will increase over time.
- Hypothesis 5: Proactive behavior will increase over time.

Relating Proactivity to Success at University

In the workplace, proactivity is a valuable and highly sought after asset (Crant, 2000). This is because proactive workers are linked with positive outcomes, most prominently, performance (Grant & Ashford, 2008), career success (Seibert, Crant, & Kraimer, 1999), tolerance for stress (Parker & Sprigg, 1999), participation in organizational initiatives (Parker, 1998), and, for newcomers, better adaptation to organizations (Cooper-Thomas et al., 2011). At least in part this is probably because proactive behaviors furnish employees with the skills, knowledge and contacts they need to succeed. For example, Saks, Gruman, and Cooper-Thomas (2011) demonstrated that the proactive behaviors which newcomers engaged in related positively to actual outcomes. For example, information seeking behaviors were by and large successful, thus benefiting both the newcomer and the organization (Saks et al., 2011). However, little is known about the consequences of being a proactive student.

In our study we consider three indicators of academic success: self-directed learning, mastery goal orientation, and grades. We argue that a successful university preparation course will render students able

to learn independently, motivated to achieve, and able to do well in university assessments.

The capacity for independent, autonomous, or self-directed learning is thought to be essential for academic success (e.g., Lounsbury, Levy, Park, Gibson, & Smith, 2009; Ogawa, 2011). Knowles (1975) described self-directed learning as taking initiative in identifying learning needs, creating goals, getting resources, and carrying out learning strategies, as well as evaluating outcomes of learning. With this definition, the characteristics of initiative and responsibility for a self-directed learner are very similar to those of a proactive individual. In a broad sense, self-directed learning is described as individuals taking the major responsibility in planning, carrying out, and evaluating their own learning needs and goals (Mezirow, 1985). The importance of personal responsibility is also recognized by both students and staff (Mckendry & Boyd, 2012). Logically it makes sense that students who are high on proactivity and/or high in the confidence to perform proactive behaviors will be more likely to engage in self-directed learning than will students who are low in proactive personality or who lack the confidence to perform proactive behaviors. Therefore we predict the following:

- Hypothesis 6a: Proactive personality will be positively associated with self-directed learning.
- Hypothesis 6b: Confidence to perform proactive behaviors will be positively associated with self-directed learning.

As students enter the university following their preparation course, they should not only have the skills and confidence to succeed but should also have the necessary ambition, motivation or drive. Achievement goals capture why and how people are motivated to succeed (Elliot, 2005). The theory is one of the more commonly reported approaches educational researchers use to study motivation (e.g., Darnon & Butera, 2005; Finney, Pieper, & Barron, 2004) and by researchers investigating proactivity (e.g., Kickul & Kickul, 2006; Wanberg & Kammeyer-Mueller, 2000). A two-by-two categorization of goal orientation has been described with each of the four possible combinations (mastery approach, mastery avoidance, performance approach and performance avoidance), capturing qualitatively different drivers of behavior (Elliot & McGregor, 2001; Elliot & Murayama, 2008). Others have referred to three rather than four categories: mastery (approach), performance (approach), and (performance) avoidance (Sullivan & Guerra, 2007). Individuals highly mastery orientated regard learning as a valid goal in itself and have a belief in self-improvement. Individuals highly performance orientated value external benchmarks and

recognition of performance (Mattern, 2005). An approach orientation signals that individuals are oriented towards success and an avoidance orientation implies that eluding failure is a motivator (Mattern, 2005).

A mastery orientation is reported as being associated with a range of favorable consequences including higher levels of self-efficacy, persistence, enjoyment, perseverance, effort, and positive affect (e.g., McGregor & Elliot, 2002; Pintrich, 2000). Furthermore certain behaviors such as innovation, problem solving and the use of various learning strategies are also associated with mastery orientation (Pintrich, 2000). In terms of outcomes, these include higher or better academic performance (Pintrich, 2000). Additionally, Belenky and Nokes-Malach (2012) reported that a mastery orientation can be fostered through learning.

Goal orientation and proactivity have been associated in the literature. Mastery orientation is regarded as an antecedent of proactive behaviors (Belschak & Den Hartog, 2010) as a stable trait that interacts with proactive personality to determine outcomes (Crant, 2000; Kickul & Kickul, 2006) and as a consequence of proactive personality (Major, Turner, & Fletcher, 2006). In our study, as in these earlier works, we anticipate that mastery orientation is positively associated with measures of proactivity:

- Hypothesis 7a: Proactive personality will be positively associated with mastery orientation to learning.
- Hypothesis 7b: Confidence to perform proactive behaviors will be positively associated with mastery orientation to learning.

Previous research can be interpreted as suggesting that proactivity will be associated with academic success as indicated by grades. For example, Frese, Kring, Soose, and Zempel (1996) argued that proactive behavior consists of an active search for and engagement in learning opportunities. Similarly, Ashford and Black (1996) suggested that proactive individuals exhibit proactive behaviors including information seeking, feedback seeking, being optimistic, negotiating, and networking, which are also likely to be related to success in an educational setting. Sidelinger (2010) claimed that proactivity renders students more likely to succeed. Ashforth, Sluss, and Saks (2007) associated ability to learn with proactive behaviors and, finally, as mentioned above, Kirby et al. (2002), found that students who received regular proactivity training performed significantly better academically than a control group. We predict, therefore, that proactive personality and confidence to

perform proactive behaviors will be positively associated with academic performance as indicated by student grades:

- Hypothesis 8a: Proactive personality will be positively associated with academic performance.
- Hypothesis 8b: Confidence to perform proactive behaviors will be positively associated with academic performance.

Method

Participants

Of the 248 students who were enrolled in a part-time single semester 13-week university preparation program at the University of Auckland, 181 completed the survey at Time 1, 139 at Time 2, and 130 at Time 3. This provided 85 individuals who completed the questionnaire at all three data collection points, yielding an overall response rate of 34%¹. Demographic data was collected at Time 1 and, of the 85 individuals who completed the questionnaire at all three time points, 25% were male (male $n = 19$, female $n = 58$); 63% were New Zealand European, 11% were Maori, 11% were Pasifika, and 24% were of other ethnicities.² The mean age of the students was 32.34 years (range = 18-61, $SD = 11.71$).

The context for the research is a single university preparation course. None of the students entering our program had university entrance qualifications and all are over 20-years-old; about 80% usually pass this preparation course and so are eligible to apply for university. Those who do enroll for an undergraduate degree progress in a manner indistinguishable from traditional age students. During the university preparation course, cohorts of about 100 students attend lectures and tutorials and so are exposed to a typical first year undergraduate experience, but their performance is heavily scaffolded with supplementary workshops and support sessions designed to develop their skills and confidence at every step. A program manager is charged with getting to know the students and so is able to pick up academic and non-academic issues that arise for individuals. Further details can be

found in Geertshuis, Cooper Thomas, Kloppenburg, and Meredith (2011).

Design and Procedure

A longitudinal design was adopted. Participants completed questionnaires at three points in time during the semester: during week 2 (Time 1), week 6 (Time 2), and week 10 (Time 3). Participants were initially approached in a lecture during the second week of the semester when the research was introduced and the opportunity to participate was given. Participation in the research was not a requirement, nor did participation or non-participation have any influence on students' grades. At each time point, questionnaires were completed in class and returned directly to a research assistant. Participants used an identity code known only to them to enable matching over data collection points.

Measures

The questionnaire included three alternative self-reported measures of proactivity and, at Time 1, included demographic questions, including age, gender, ethnicity and years since leaving school. At Time 3, a range of outcome measures were captured. All measures are described below.

Proactive personality was measured using 10 items from Bateman and Crant's (1993) proactive scale. Participants were asked to rate the extent to which they agreed with each item, such as, "If I see something I don't like, I fix it." Items were scored on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Confidence to perform proactive behaviors and proactive behavior were measured using items developed specifically to be relevant to a university preparation program. While there are several existing proactive behavior measures available—such as those for information seeking, feedback seeking, general socializing, networking, relationship building, and positive framing developed by Ashford and Black (1996)—they were unable to capture the proactive behaviors that are important in the academic setting. The items we included in the questionnaire tap into the three broad areas of behavior: problem solving, networking and relationships, and knowledge seeking. There were 12 items that were presented twice in the questionnaire. For one set of the 12 items participants were asked to indicate how confident they felt in performing the behavior (e.g., "How confident would you be in: Asking a question in class or at tutorials?"). These items were assessed on a scale of 1 (*not at all confident*) to 7 (*very confident*). For the other set of 12 items, participants were asked to reflect on the past 2 weeks and indicate how often they had engaged in the particular behavior (e.g., "How often have you: Asked a

¹ Note that the number of students included in any analysis varies slightly, in each case being the maximum sample we had data for relevant to that analysis. These numbers are provided for each analysis. The smallest number of students in any analysis is 67, being the number who confirmed that we could have access to their academic grades.

² Participants were able to indicate that they belonged to more than one ethnic group, which some participants did, therefore the percentages for ethnicity add up to more than 100 percent.

question in class or at tutorials?”). This was measured on scale of a 1 (*not at all*) to 7 (*very often*). For this second set, the wording of the items was modified slightly so that the statements were in the appropriate tense. Thus, we had a total of 24 items, with 12 reflecting participants’ confidence or efficacy in engaging in the behaviors and 12 reflecting the extent to which participants had engaged in the behavior in the 2 weeks prior.

Self-directed learning was measured with the 10-item Self-Directed Learning Scale used by Lounsbury et al. (2009). We adapted the scale to 7 rather than 5 points to maintain consistency with other scales in our questionnaire, retaining the same *strongly disagree* to *strongly agree* endpoints as Lounsbury et al. (2009). An example item used in the Self-Directed Learning Scale is, “I set my own goals for what I will learn.”

Goal orientation was assessed using Elliot and McGregor’s (2001) measure of approach and mastery achievement goals. Some minor adaptations to the wording of these items were made to make the items applicable to our context and specifically to make the items relevant to university students (e.g., “I want to learn as much as possible from this program.”). Participants were asked to rate the extent to which they agreed with each item on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Course grades comprising an aggregate of three essays submitted as term work and an end of course test, comprising multiple choice and short essay questions, were recorded for those students who granted the researchers access to their records. Grades were

available for 67 of the 85 students who provided data at Times 1 through 3.

Results

Descriptive statistics were calculated and all analyses were conducted using IBM SPSS Statistics 20. No outliers or other abnormalities were found. Table 1 and Table 2 show the means, standard deviations, Cronbach’s alpha scores, and the intercorrelations between items used in regression analyses. All Cronbach’s alphas are acceptable, being in excess of 0.85 for each measure, indicating high inter-item reliability (Cronbach, 1951).

Hypotheses 1, 4, and 5 relate to changes in proactivity measures over time and were assessed using repeated measures analyses of variance (RM-ANOVA). The repeated measures were proactive personality, confidence to perform proactive behaviors and proactive behaviors. Mean scores are shown in Figure 1. Proactive personality did not change significantly over time, $F(1, 81) = .227, p > .05$, which is consistent with Hypothesis 1. Confidence to perform proactive behaviors and also proactive behaviors appeared to change over time with the means showing an increase over time, $F(1, 84) = 9.06, p < .01$; $F(1, 81) = 3.80, p = .055$, respectively. The change in proactive behavior only approached significance in the RM-ANOVA, but the means suggest a consistent trend and the mean scores at Time 1 and Time 3 are significantly different, $t = 2.18, df =$

Table 1
Descriptive Statistics, Correlations and Alphas Among Time 1 Proactive Personality, and Confidence Variables and Time 3 Proactive Behaviors, Self-Directed Learning, Mastery Orientation, and Grades

Variable	M	SD	Correlations							
			1	2	3	4	5	6	7	8
1 Gender	--	--	--							
2 Age	31.21	11.71	.07	--						
3 (T1) Proactive Personality	5.08	1.00	-.01	.00	(.92)					
4 (T1) Confidence in Performing	4.96	1.02	.00	-.01	.48**	(.87)				
5 (T3) Proactive Behavior	4.56	1.17	.10	.14	.39**	.39**	(.86)			
6 (T3) Self-Directed Learning	5.19	.92	.09	-.02	.45**	.50**	.44**	(.90)		
7 (T3) Mastery Approach	6.21	.97	.09	.15	.29**	.28**	.27**	.31**	(.87)	
8 (T3) Grades	5.79	2.4	.11	.09	-.03	.07	.02	.16	.19	--

Note. $N = 89$. (diagonal) = Cronbach’s alpha.

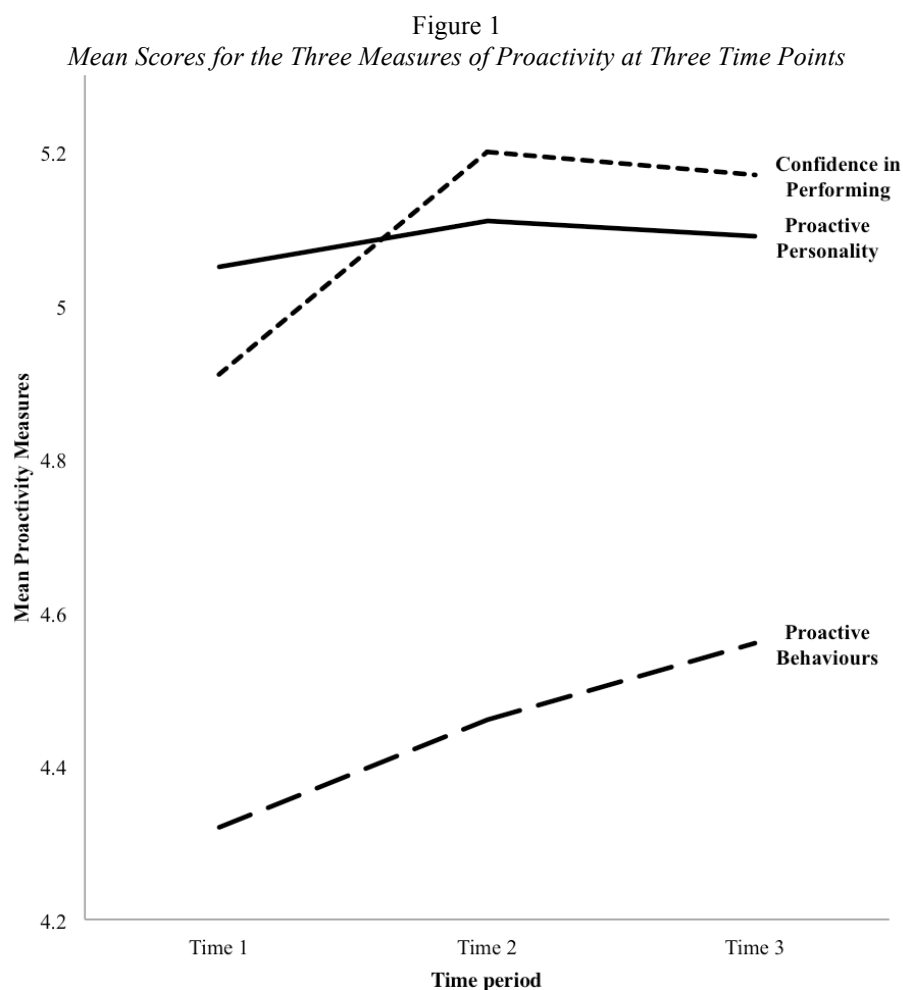
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2
Descriptive Statistics, Correlations, and Alphas Among Time 3 Proactive Personality and Confidence Variables and Time 3 Proactive Behaviors, Self-Directed Learning, Mastery Orientation, and Grades

Variable	<i>M</i>	<i>SD</i>	Correlations							
			1	2	3	4	5	6	7	8
1 Gender	--	--	--							
2 Age	30.93	11.36	-.03	--						
3 (T1) Proactive Personality	5.13	.95	.01	-.00	(.93)					
4 (T1) Confidence in Performing	5.16	1.01	.01	.06	.60**	(.89)				
5 (T3) Proactive Behavior	4.56	1.17	.10	.04	.54**	.61**	(.86)			
6 (T3) Self-Directed Learning	5.19	.92	.09	-.06	.64**	.59**	.44**	(.90)		
7 (T3) Mastery Approach	6.21	.97	.09	.13	.42**	.38**	.27**	.31**	(.87)	
8 (T3) Grades	5.79	2.40	.10	.11	.01	.29**	.02	.16	.19	--

Note. *N* = 116. (diagonal) = Cronbach's alpha.

p* < .05. *p* < .01. ****p* < .001.



Note. Proactive personality did not change significantly over time, whereas confidence to perform proactive behaviors and actual proactive behaviors increase over time.

100, $p < .05$. Overall, our results confirm Hypotheses 1, 4, and 5 regarding the stability of proactive personality and the increase in confidence in performing proactive behavior scores and proactive behavior scores over time.

Hypotheses 2, 3, 6, 7, and 8 predict that proactive personality and confidence to perform proactive behaviors are associated positively with a number of outcomes. These hypotheses were tested using a series of multiple regression analyses. In each analysis, age and gender were entered as control variables and proactive personality and confidence to perform proactive behaviors as independent predictors. In the first set of regressions Time 1 measures of the independent variables were assessed as predictors of Time 3 outcomes (Table 3). In the second set of regressions all measures were captured at Time 3 (Table 4). While the first set of regressions offer the stronger test, being separated in time, they reflect data captured before any opportunities for the course to impact on predictor variables.

The control variables of age and gender were not significantly associated with any outcome in any analysis (see Tables 3 and 4). Hypotheses 2 and 3 predicted positive associations between proactive personality and confidence to perform proactive behaviors and proactive behavior respectively. Both hypotheses were supported with proactive personality at

Time 1 and Time 3 predicting proactive behavior at Time 3, $\beta = .34, p < .01$; $\beta = .37, p < .001$, respectively, but confidence to perform proactive behaviors being significantly associated with Time 3 proactive behaviors only when confidence was assessed at Time 3, $\beta = .21, p > .05$; $\beta = .39, p < .001$, respectively.

Hypotheses 6 predicted positive associations between proactivity (H6a) and confidence to perform proactive behaviors (H6b) with self-directed learning. This was confirmed with proactive personality and confidence measured at both Time 1 and Time 3 significantly predicting self-directed learning at Time 3, $\beta = .22, p < .05$; $\beta = .37, p < .001$; $\beta = .42, p < .001$; $\beta = .33, p < .001$, respectively.

Hypotheses 7 predicted positive associations between proactive personality (H7a) and confidence to perform proactive behaviors (H7b) and a mastery orientation. Measures of proactive personality and confidence taken at Time 1 approached significance, $\beta = .19, p > .05$; $\beta = .15, p > .05$, respectively, and collectively adding these two variables to the regression analysis resulted in a significant change in R^2 , $R^2 = .09, p < .05$. When proactive personality was assessed at Time 3, it was significantly associated with mastery orientation $\beta = .33, p < .05$, although confidence to perform was not, $\beta = .13, p > .05$. These results offer partial support for our hypotheses.

Table 3
Hierarchical Regression with Time 1 Proactive Personality and Confidence as Predictors of Time 3 Proactive Behaviors, Self-Directed Learning, Mastery Orientation, and Grades

Predictor	Proactive behaviors	Self-directed learning	Mastery orientation	Grade
Step 1: Gender	.11	.09	.07	.13
Age	.02	-.04	.12	.08
R^2	.01	.01	.02	.02
Step 2: Proactive personality	.34**	.22*	.19	-.08
Confidence	.21	.42***	.15	.14
Change R^2	.24***	.33***	.09*	.02

Note. $N = 107$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4
Hierarchical Regression with Time 3 Proactive Personality and Confidence as Predictors of Time 3 Proactive Behaviors, Self-Directed Learning, Mastery Orientation, and Grades

Predictor	Proactive behaviors	Self-directed learning	Mastery orientation	Grade
Step 1: Gender	.10	.05	.11	.12
Age	.02	-.07	.14	.09
R^2	.01	.07	.03	.03
Step 2: Proactive personality	.37***	.43***	.33**	-.17
Confidence	.39***	.33***	.13	.36**
Change R^2	.45***	.47***	.18***	.07*

Note. $N = 107$.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Finally, Hypotheses 8 predicted that measures of proactive personality (H8a) and confidence to perform proactive behaviors (H8b) would be associated with academic success as indicated by end of semester grades. Measures of proactive personality and confidence taken at Time 1 were not predictive of grades, $\beta = -.03, p > .05$; $\beta = .10, p > .05$, respectively. However, confidence to perform proactive behaviors captured at Time 3 were strongly and positively associated with final grade, $\beta = .36, p < .01$. Proactive personality assessed at Time 3 was not a significantly associated with grades, $\beta = -.16, p > .05$.

Discussion

In overview, this study indicates that proactivity-related variables are both predictive of important educational outcomes and amenable to change. Thus, proactive behavior is brought to the fore as an important consideration in higher education settings with significant practical implications for preparing and supporting students.

Looking at our results in more detail, the underlying premise of our research is that proactive behavior is important for students in higher education because, at this level, much of their learning depends on their own initiative (Kirby et al., 2002). For example, finding resources for assignments, clarifying feedback from tutors, and sharing information with peers are all proactive behaviors that would be expected to result in a more successful higher education experience for students. We discuss our results in reverse, first examining our findings establishing the importance of proactivity for student learners, and then considering predictors of proactivity and patterns of proactivity change over time.

We used three indicators of student academic success, namely self-directed learning, mastery orientation to learning, and academic grades. For each of these, we looked at proactive personality and confidence to perform proactive behaviors as predictors.

Self-directed learning is a specific kind of initiative taken by learners to identify and meet their learning needs and is considered central to academic success (Lounsbury et al., 2009). As hypothesized, self-directed learning was predicted by proactive personality and confidence to perform proactive behaviors both at the beginning of the course and at the end of the course (H6a and H6b). Proactive personality and confidence to perform proactive behaviors are both most distal to actually behaving proactively, with self-directly learning being a context specific self-assessment of actual behavior. Thus, perceptions of tendencies and efficacy in being proactive are associated with relevant behaviors for student learners.

Mastery orientation refers to students focusing on learning for its own sake, with an orientation towards self-improvement through engaging with the task (Pintrich, 2000). Our results for the relationships of mastery orientation with our two measures of proactivity were mixed. For these two proactivity-related measures—proactivity personality and confidence to perform proactive behaviors—when measured at the beginning of semester individually, they approached being significant predictors and jointly were predictors of mastery orientation. At the end of semester (Time 3), only proactive personality was significantly associated with mastery (H7a and H7b). Previous work offers alternative interpretations of the relationship between mastery orientation and proactivity (e.g., Belschak & Den Hartog, 2010; Crant, 2000; Major et al., 2006). It is reasonable to suppose that proactive personality co-varies with mastery in that they are overlapping constructs or that proactive personality is an antecedent of a mastery orientation. Our data do not enable us to explore these issues in detail, although our finding of an effect at Time 3 but not at Time 1 may suggest that mastery orientation is more plastic than is proactive personality, which we deemed to be stable.

Our final measure of academic success is grades. Our measures of proactivity taken at Time 1, the start of semester, were not predictive of grade, and nor was proactive personality as measured at Time 3, the end of semester (H8a). However, Time 3 confidence to perform proactive behaviors was significantly associated with grade (H8b). While these results might be influenced by difficulties in collecting accurate grade data (see Limitations section below), it suggests that proactive behavior at the end of semester is more important than at the beginning of semester.

Given our findings that, overall, proactive behavior is important for achieving academic success, we were interested to know how various measures of proactivity vary over time. In line with expectations, proactive personality did not change significantly over the semester (H1), but both confidence to perform proactive behavior and proactive behaviors themselves (H4 and H5) increased over the semester period. Hence students did show increased confidence and actual behavior reflecting the self-initiative necessary for studying.

Our final question then is what predicts proactive behavior. As anticipated, we found that proactive personality and also confidence to perform proactive behaviors both predicted actual proactive behaviors (H2 and H3). Thus, while those who are more proactive due to their personality have an advantage, the fact that confidence to perform such behaviors is predictive and that this variables changes over time suggests that confidence to behave proactively may be particularly

useful for interventions. We explore this idea further in the practical implication section below.

To summarize our findings, to varying degrees proactivity measures were found to be predictors of proactive learning behaviors, self-directed learning, mastery orientation, and academic performance. In short, students who are more proactive are more likely to score high on indicators of success. For example, students with more proactive personalities are more likely to engage in self-directed learning than those who are less proactive. However, reassuringly students' confidence to perform proactive behaviors and proactive behaviors increased over the semester, demonstrating that proactivity, as indicated by these two measures at least, is amenable to change. Our work supports and extends previous findings (Kirby et al., 2002) showing that proactivity can be developed.

Practical Implications

This study has implications for the design of teaching and learning in higher education. If proactivity determines success, and if at least some aspects of proactivity are malleable, then our attention should turn to how learner proactivity can be better enhanced. It may be that more emphasis should be placed on proactive learning than on achievement-based learning, thus re-orienting the focus of current teaching and learning. But how should this be done? Within the organizational literature proactive behaviors have been found to be enhanced by providing employees with autonomy, flexibility, and enhancement of their self-efficacy (Parker et al., 2006). It is likely that allowing students to create or develop their own learning strategies, giving them information on where to seek help, and teaching them the importance of networking can all be essential in promoting proactivity. This is a little different to the approaches advocated in efforts to develop self-directed or self-regulating learners. However, the work of Parker and Collins (2010) may take us a little further. These researchers suggested a motivational foundation to proactivity and suggest that efficacy or a confidence in ability to perform proactive behaviors is only a partial determinant of behavior. They suggest that individuals must, in addition, feel energized or enthused before they will be proactive and must also feel there is a reason to be proactive, that is, they must view the outcomes of being proactive as beneficial (Parker & Collins, 2010). Most university courses to our knowledge do not, but perhaps could, systematically build and maintain these forms of motivation. Additionally, we suggest a further motivational dimension, that of "permission to." As teachers we encounter many instances of students who know how to engage in proactive behaviors, are confident that they have the skills, are keen to try and

anticipate that the outcomes may be beneficial, but feel that such behaviors may be out of their role or inappropriate. In our own teaching we have begun to expend considerable energies in explicitly seeking to foster all four motivational orientations.

Limitations

Our sample was drawn from one university preparation course, and it is important for readers to understand the delivery model we adopt as these findings may not hold universally. It may be that the provision of supplemental instruction in this course, available to all and flexible in nature, is serving to build confidence and build skills and so promote proactive problem solving, networking and information seeking. Our course does not explicitly teach proactive thinking, and students would have had no more than 1 hour exposure to explicit instruction on proactive behaviors. Potentially, the gains in confidence and proactive behavior observed here could be greatly enhanced by direct and substantial interventions

In the paragraphs above we have mentioned a number of limitations including questions over generalizability and causality. We are unable to assess the extent to which our findings apply to other university preparation programs, although given the consistency of our results with work in other areas of proactivity research there are few reasons to suppose that they will not.

Additionally, and as we allude to above, there were limitations in our data collection methodology that reduced the sample size. We tracked students across time using a unique student identifier known only to the student. However, a number of participants forgot, changed or miswrote their code, and so data were lost. Additionally, questionnaires were distributed and collected back in prior to commencement of a lecture so as not to take up teaching time. The downside of this was that students arriving even a few minutes late did not have time to complete the questionnaire. We raise these difficulties so that future research can take greater care to resolve them. For the present research, effects found with a smaller sample size suggest that the findings are robust, and hence these limitations do not reduce the importance of the findings.

We experienced some difficulties in predicting grade data. Firstly, not all participants who provided questionnaire data anonymously provided details that would allow us to access their grades. Secondly, in a minority of cases we had access to pre-course assessments of literacy that correlated to a moderate degree with end of course grades. This albeit partial and preliminary analysis suggests that the design of our study would have been improved by capturing literacy as a control variable and recording the grades of the whole sample.

Finally, our regression statistics, being correlational, do not enable us to establish causality although having monitored and demonstrated changes over time is a definite strength of the study.

Future Research

The substantial body of research on proactivity and proactive behaviors has been conducted primarily within workplaces and organizations rather in the field of education. Our findings strongly suggest that similar research conducted within higher education settings could afford us great insight. Our findings indicate that proactive students engage in problem solving, networking and information seeking behaviors, are self-directed learners, have a mastery orientation and—although we are cautious in our claims here—get better grades.

Simple replications of this initial study would be an essential first step in an effort to establish the generalizability and rigor of our findings. This study was an initial investigation, and tracking a larger cohort and continuing through into undergraduate studies using a range of measures of proactivity would establish the status of these findings.

To further advance on our findings, we need to better understand the relationship between proactivity and variables known to be associated with student success. We need to establish how to foster or develop proactivity within students and so enhance learning. As yet we do not understand the extent to which proactivity determines success within higher education, nor do we know which approaches to teaching and learning maximize students' proactive thinking and behaviors and so foster positive academic outcomes. The field is ripe for researchers willing to identify, develop and evaluate effective interventions, which schools and universities can easily implement. From a theoretical point of view further research designed to establish the extent to which self-directed learning and self-regulated learning are caused or limited by proactivity and the extent to which they are unique constructs or are a simple reflection of situated proactivity would be valuable.

Conclusion

This paper examined alternative indicators of proactivity and assessed how they are associated with each other and with proactive behaviors, self-directed learning, learning orientation and academic performance. The results indicate that proactivity is predictive of positive academic outcomes. Furthermore, it was also revealed that the proactive behaviors are plastic, suggesting that students could be helped to develop proactive behaviors and proactive thinking,

potentially enhancing their performance at the university. However, literature within education has only a handful of studies examining student proactivity which, we argue, is a serious omission. This study serves to open up a relatively untouched field within the educational literature and presents evidence that justifies extensive further work.

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SUSAN GEERTSHUIS is Professor of Lifelong Learning and Director of Learning and Teaching at the University of Auckland Business School. She is also the university's Director of Electronic Engagement. Her research interests are in learning and influences both at university and in the workplace.

MOON JUNG is a postgraduate student and scholar at the University of Auckland. Moon has a background in business and psychology.

HELENA COOPER-THOMAS is a senior lecturer and Director of Postgraduate Studies in Industrial Work and Organisational Psychology at the University of Auckland, New Zealand. Helena's research interests focus on new employees, in particular their learning and proactive behaviors, and various aspects of employee-employer relations.

Listening to the Voices of Novice Lecturers in Higher Education: A Qualitative Study

Marcos J. Iglesias-Martínez, Inés Lozano-Cabezas, and María A. Martínez-Ruiz
University of Alicante, Spain

The professional development of novice staff at the university still requires considerable improvement. In this research paper, and in an attempt to define a development model in higher education, attention is paid to the perspectives and judgments of novice university staff. The research focuses specifically on the expression of their problems, difficulties, dilemmas, and decisions related to their course plans and classroom contexts. The methodology applied here integrates processes of qualitative interpretation supported by the AQUAD Six data processing program in the presentation of results. These findings make clear the need to integrate novices into the teaching community in order to reduce the fears they experience on starting their academic careers and increase the benefits to the university community as a whole.

Participative Teaching-Learning Communities

Teaching competence at universities is becoming a relevant subject within educational research. However, publications related to it are not as abundant as they are in other educative levels (Borko, 2004; Day & Sachs, 2004; Richardson, 2001). This is even more serious at this precise moment, when attending to the needs of novice university teachers and reinforcing the professional skills of the expert ones is more urgent, for all of them must face the challenges of advanced 21st century society (Altbach, 2007). The challenge of assuming a deep transformation in the ways to generate, manage and distribute knowledge and learning requires a specific professional development of the university teaching staff in order to achieve conceptual and methodological changes. Therefore, much more research is necessary on university teachers' in service, and it is also urgent that pedagogy in higher education must focus on teaching-learning processes (Zabalza, 2007). As Blackmore (2009) stated, "Academic pedagogy is necessarily, as intellectual work, informed by theories and research, open to discussions that cannot be predetermined, requiring new inputs and directions, as each teaching moment is situated and non-replicable" (p. 870). Although this applies to all staff, research on the initial education of novice staff should concern us especially because, as happens at other levels of education, new university academics come up against what Veenman (1984), in writing about school teachers, called *reality shock*: "The collapse of the missionary ideals formed during teacher training by the harsh and rude reality of classroom life" (p. 143).

The identification, analysis and conceptualization of the demands of novice staff could be powerful instruments to advance research in teacher induction (Vonk, 1996) and it can change teaching and learning strategies in higher education (Nicholls, 2005). In today's perspective, learning is viewed as a social

phenomenon where effectiveness is greatly enhanced when it takes place within a community of practitioners (Cochran-Smith & Lytle, 2011).

In our networked society of information (Castells, 2000), with its high level of connectivity (Christakis & Fowler, 2009), there is general agreement among academics that the professional development of new lecturers should take place within the community formed by the center and the department to which the lecturer is assigned. We might, therefore, consider three approaches to this process. Firstly, Lave and Wenger (1991) defined the conceptualization of learning as a process of decision-taking, compromise and negotiation, which corresponds with understandings about the nature of scientific knowledge. The authors' concept of legitimate peripheral participation places both the learner and the expert in a situation of multiple pathways and alternatives, at a nexus of dynamic and complex relationships. Secondly, the view of pre-service teacher education taken by Cochran-Smith (2008) and Cochran-Smith and Lytle (1999) emphasizes the idea that the knowledge acquired by the novice is not only connected to that of the expert, but also interacts with that of all his or her peers within the teaching community. Within a research community the expert continues to undergo a learning process, and, therefore, the acquisition of knowledge by both the expert and the novice takes place interdependently within the community as a process of mutual interaction. Thirdly, Wasser and Bresler (1996) focused on the configuration of an area of interpretation within the realm of qualitative. This is an important contribution towards a new model of professional development, as the novice operates in a participative context, where multiple voices and views regarding professorial activities interact in both convergent and divergent ways. Each one of these perspectives is characterized by the novice and expert teachers' collaborative and participative work, when they share and compare their own different interpretations,

building up knowledge within the very community in which novice teachers work. This underlines the essential role of novice-tutor relationship, for it helps to enrich shared learning atmospheres, where distances are shortened and relationships are developed.

In probing more deeply into the nature of learning communities in higher education, three persistent characteristics can be identified. In the first place, learning communities are located in genuine contexts, in actual places of work. These are communities in which everyday problems repeatedly arise, complex problems that are only partially identified, whose limits are hard to define (Roth & Tobin, 2004). Secondly, participants collaborate in order to achieve a particular goal or to meet a particular challenge (Whitcomb, Borko, & Liston, 2009). Thirdly, experience and knowledge function as properties of the community in question (Lieberman & Pointer-Mace, 2009; Lieberman & Wood, 2002). These characteristics also serve to describe the circumstances in which new academics find themselves. The situations they have to face are complex and difficult to define: problems of discipline, student hostility, teacher insecurity, and so on. Usually there is a will to work together towards a goal, or towards an institutional obligation that has to be fulfilled; and, within the university community, the novice lecturer has access to a wealth of knowledge and experience that can be shared and debated.

Informed by this brief examination of the literature in this area, the aim of this research is to examine the thoughts and experiences of young academics in relation to their initiation into teaching (Holley & Colyar, 2009), in order to discover what realities and starting-points can enhance or inhibit agreement on a more social and community-orientated approach to the professional development process. Sixty newly appointed members of staff participated in the research. The sample was based on the category similar to a teaching assistant or assistant lecturer at American or other European universities. Voluntarily, they agreed in to share their difficulties, doubts, worries and in general all their positive and negative experiences of the world of university lecturing with the researchers. The research was focused upon the following research questions:

1. What are the main difficulties or problems that new academics face in their teaching at the university level?
2. What tensions do you perceive in relations with others (students and colleagues) within the framework of your professional development?
3. What do they see to be lacking and necessary in their development as university new staff?

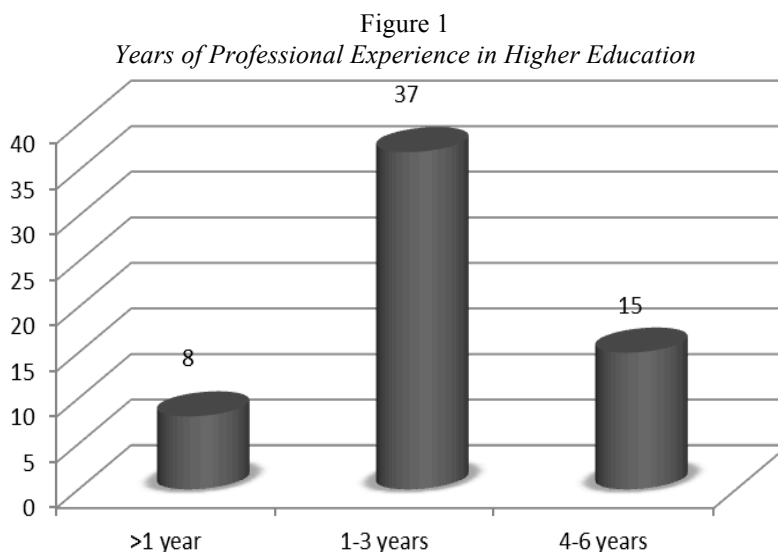
Methods

Participants

The young members of staff who participated in this study were teaching at the University of Alicante, Spain (UA). At the time when this research was carried out, there were a total of 119 novice academics in the UA. They were all invited to take part in the research. The cohort involved in this study was composed of 60 staff members, of whom 50% were female and 50% male. 90% of the participants were aged between 26 and 30, partly due to the fact that a contract as members of staff is the principal mode of entry into the body of teaching staff in Spanish universities, though not the only one. The participants who took part in this research came from all the faculties of the UA. The groups selected in this analysis have been created according to the length (in years) of teaching experience in higher education. As can be seen in Figure 1, the group has been classified into three categories based on years of experience: less than 1 year; between 1 and 3 years; and between 4 and 6 years.

Data Collection

A qualitative methodology enables researchers to analyze and interpret subjects' answers within the framework of their social context (Polkinghorne, 2006), making it possible to establish a higher degree of interaction between the collection of data and its analysis. To collect our data, we decided on a semi-structured interview format as appropriate for the present qualitative study (Denzin, Lincoln, & Giardina 2006). The interview is one of the most commonly used methods of approaching lecturers' practical epistemology and conceptions of teaching teacher in higher education (Dunkin, 1990; Kember & Kwan, 2000; Samuelowicz & Bain, 2001). During the interviews, subjects were asked to reflect on their teaching problems: programming, methodology, assessment, tensions in their relations, and perceived needs related to these difficulties. A total of 60 interviews were carried out between the September and December in 2008. The themes of reflection were sent by e-mail to all participants. The average duration of the interviews was between 20 and 30 minutes, except for one, which lasted for nearly an hour. The majority (47) considered it more comfortable that their responses were audio recorded. Only a few (13) responded the interview in writing. The audio-recorded interviews did not contain additional questions, and subjects were not interrupted while speaking. All the audio recordings of the interviews were later transcribed as written texts.



Procedure

We chose the AQUAD Six software, developed by Huber¹ (1998), due to its capacity to combine the processes of interpretation and codification of the interaction between the emergence of categories in the statements given by the participants and the conceptualization and structure that researchers should apply to the emerging categories via a codification process. The process was, therefore, based on, and faithful to, the first maps of emerging categories. These maps were analyzed and validated by three expert and two novice academics until a definitive configuration was agreed upon. This configuration was subsequently modified slightly due to adjustments deriving from the intensity of the codification and possible variants or emerging shades of meaning. In this way it was possible to understand more completely the phenomenon under examination² (Miles & Huberman, 1994). Finally, the emerging codes of the narratives were articulated in such a way as to provide a rigorous organizational structure within the conceptual framework of the theory established in the research (Glaser & Strauss, 1967).

The three questions were used as a guiding framework for the first stage data analysis. Seven categories or codes emerged, and these were later

subdivided into multiple sub-codes. The initial emerging categories split and multiplied into different codes and sub-codes as the different researchers performed their shared analyses and deeper meanings were discovered through the reiteration of the interpretative process. Although our interpretative research is based on a qualitative approach, we also thought it convenient to present the results in a quantitative format. The frequency of appearance of certain key words and expressions were also measured. The AQUAD Six software also provided this additional computation.

Results and Discussion

Research Question 1

The first research question was: “What are the main difficulties or problems that new academics face in their professional teaching activities?” The results concerning this research question revealed three clusters in the novice lecturers’ narratives: course-planning difficulties (code 1), teaching implementation dilemmas (code 2) and tensions in assessment procedures (code 3). These clusters show slight variations and discriminations depending on different shades of meaning.

As can be seen in the Appendix (Section: course-planning difficulties), lecturers’ reflections on the course-planning phase concentrated on three aspects of the teaching process: preparing content and method, preparing learning materials and establishing a time schedule. All this proved hard to do, and created moments of anxiety. For example, on respondent said: “When you start teaching you have no idea about

¹ We would like to express our gratitude to Professor Huber for his review of this paper and his comments. His help was specifically provided during conversations with him during a period of research study at the Institut für Erziehungswissenschaft at the University of Tübingen (Germany). Recently the software has been developed to AQUAD Seven (Huber & Gürtler, 2012).

² In this process we combined a deductive and an inductive strategy, AQUAD Six supports a combination of both.

anything. . . . I was very scared, . . . I felt very insecure” (D055)³.

The participants were anxious to prepare their classes properly (see Appendix, sub-code 1.1). Similarly, they were worried about the preparation of teaching resources to facilitate students’ learning (see Appendix, sub-code 1.2). The novices described their deep concern when faced with the need to plan the content of a subject. They were worried that they might not have sufficient command of the content matter to respond adequately to students’ questions and the demands of the curriculum, and in every case they stated that this required a considerable effort:

On the one hand, the range of subjects we are required to teach because we are “new to the job” is huge; this means that every year we have to prepare content, programs, practice sessions and so on, for subjects that sometimes we are seeing for the first time, which in turn requires a lot of bibliographic work and self-preparation for the classes. (D012)

In general it is clear that for most novice academics preparing the subject means preparing the content to be taught rather than the processes of teaching. One subject explained: “I prepared the topics carefully, but I felt that I didn’t have full command of the content” (D055). Another stated: “Sometimes you have to know fifteen times more than what you actually have to teach, in order to be confident especially” (D004).

In their statements, the participants revealed no knowledge or awareness of the new strategies of teaching-learning in the European Higher Education Area (i.e., a learning process focused on the student and the development of his or her abilities and competences). Class preparation focused on content, with keywords like “explain” and “transmit”. One participant explained: “A good teacher has to be able to transmit knowledge, has to know a lot and also know how to transmit it and how to make it attractive while it is being transmitted” (D021).

Participants appeared to doubt, however, whether they had selected the content adequately or sufficient command of specific content areas, and whether they could convey their knowledge so that students can understand their explanations. In addition to this feeling of insecurity, there was a striking difference between the frequency with which novices mentioned key concepts like “teaching” or “content” and that with which they used other expressions like “learning,” “objectives,” or “competences,” which would follow

more closely the new proposals of teaching-learning in the European Higher Education Area. This result suggests that the academics processes at the UA, and perhaps in Spanish universities in general, were promoting a view of curricular design as one concerned with the organization of content rather than one also concerned with teaching as learning construction within a community of practice. Another group of voices expressed their difficulties with the organization and distribution of time in teaching (see Appendix, sub-code 1.3: Time scheduling):

The main difficulty was in finding out, for example, how much material [content] would take up an hour of class time, and I remember that they told us we had 45 hours and I didn’t know if that was a lot or not very much, I didn’t know how far you could stretch a class hour. (D008)

The second grouping of narratives coincides in the view that the everyday work of novice academics is the implementation of course plans, actual classroom praxis. These reflections revealed greater diversity among the different narratives than was the case with those referring to curricular planning. Code 2 deals with narratives concerned with lecturers’ fears regarding personal traits and communication skills (see Appendix, sub-code 2.1) as well as negative conditioning factors influencing their teaching (see Appendix, sub-code 2.2: Teacher-student ratio; and sub-code 2.3: Infrastructure). It also shows worries about the subject itself (see Appendix, sub-code 2.4: Theory and practice; and sub-code 2.5: Usefulness of the subject).

Sub-code 2.1 (Personal teaching skills) refers specifically to personal traits like shyness or social insecurity, as well as to problems deriving from a lack of communication skills in expressing, transmitting or simply explaining content to the students. This is well expressed in the following: “I’ve had some bad moments there [while teaching the subject] even in class, you think you know something and when you try to explain it you lose the concepts, and I’ve had a bad time” (D023); and,

I’m beginning to realize that I do have full command of the content. However, I am aware that I have difficulty in expressing myself and in making myself understood. What I try to do is emphasize what I really mean, but I get the impression that they look as if they have understood nothing and that they are not following what I’m trying to explain. (D019)

These data show that sub-code 2.2 (Student-teacher ratio) was a decisive problem area for these novices. It is undoubtedly one of the biggest problems on the

³ “Docentia” is the name assigned to the project when entering it into AQUAD Six. Academics’ statements were numbered to ensure their anonymity.

Spanish university landscape. Many subjects reported classes of 200 or even 300 students. Sub-code 2.3 (Infrastructure) refers to deficiencies and occasions when the infrastructure makes methodological improvement difficult:

The classrooms are not suitable for proper teaching because they contain fixed desks. . . . You can't get the class to form a circle, act out a scene or carry out an activity that requires movement, because they are completely rigid and not very useful. (D003)

Another aspect that worried these novices is the difficulty deriving from the theory-practice distinction (see Appendix, sub-code 2.4). The problems identified were both the teaching of practice and theory, and the difficulty of showing students how they are applied and interrelated. For example, one participant noted: "They don't see the usefulness of the theory in the practice. And that is a problem" (D024).

Some participants reported greater misgivings when teaching practical classes than when teaching theory, because in the former student participation is more unpredictable: "I get very nervous [in practical classes]" (D004); and "I try to get them to participate and there's no way" (D027). It is also significant that some subjects referred to their fear of having no counter-arguments when students question the usefulness of the subject (see Appendix, sub-code 2.5).

Assessment procedures were another source of reflection. It is one of the areas in which novices felt most insecure and worried. For instance, "In assessment, I'm only a beginner . . . and I ask myself, 'Am I grading this properly?'" (D027); and, "You never find an assessment methodology that is completely satisfying. They all have defects, none of them are perfect, they all leave gaps, they all cause unfairness" (D032).

The highest number of narrative segments is to be found in sub-code 3.2 (Objectivity). Young academics worried a lot about guaranteeing objectivity (reliability and validity) in assessment procedures and about being fair in assessing the effort made by a student. One participant explained:

Where assessment is concerned, of course you are always looking for an ideal objective model, because it's very difficult, but I try to be as objective as possible and try to make sure that the margin of subjectivity is relatively small, but, well, it's difficult. (D042)

This concern is significant because it reflects more a final-examination model rather than a formative-continuous assessment model. At the same time, the

aspect of complexity (see Appendix, sub-code 3.3) raised by some participants in assessment procedures is maximized when their view of assessment is more integrative: "In my view, assessment is one of the most important things in teaching, and I don't think I do it very well, but bearing in mind that I don't think anybody does it well, because it's very complicate" (D009); and, "I believe it's difficult to be completely objective and fair in assessing the effort made by students and their performance" (D026).

The presence of sub-code 3.1 (Amount of work) provides evidence of a series of complaints about the effort involved and the time required to assess an excessively large number of students or to apply a continuous assessment procedure: "I think that when you get to exam number 150 you are not grading in the same way as you did with the first one" (D024); and, "[Continuous assessment] looks very nice but in practice it's impossible" (D030).

Research Question 2

Our second research question was, "What tensions do you perceive in relations with others (students and colleagues) within the framework of your professional development?" Teaching is an eminently relational activity. Our second research question therefore centers on reflections made by new academics regarding their relationships with their students and with their staff colleagues. The codes responding to this research question are codes 4 (Student/group-class problem) and 5 (Tension in relations with colleagues). The former is subdivided into three sub-codes (see Appendix: generally speaking, the perception of tension in the learning environment and a lack of proper behavior among first-year students. They include the perception of a low academic level and lack of motivation among students, a lack of participation, or the dilemma of choosing between being a severely demanding teacher and being over-friendly towards the students. All these reflections are closely interrelated.

A lack of discipline is not normally a serious problem in university classrooms (see Appendix, sub-code 4.1: Classroom atmosphere). Yet participants' statements in the interviews do reveal problems in maintaining a suitable learning ethos in class (e.g., silence, respect, attention):

But what is a fact is the attitude they have sometimes: what you might call a lack of values. I don't know, keeping quiet, listening, and showing some consideration for the other student they have to work with, and so on. That sort of thing. (D036)

The highest percentage is to be found in sub-code 4.2 (Students' academic level). Participants considered

that students' command of conceptual notions was below that which they expected. In reality, the problems involved in this sub-code relate to students' lack of basic knowledge, which leads to difficulty in learning new content or to difficulties arising from disparity in competence levels within the group. This sub-code is well characterized in the following extract:

Here I would emphasize the gaps they have. For instance, when they start the first year they don't know how to formulate. So what do you do? You have limited time, only just enough and you start teaching them how to formulate, so then you can't cover the other content or you have to go quicker. On the other hand, if you skip over formulation and tell them to sort themselves out, to learn to formulate by themselves, you have a learning gap. Then that becomes a problem. (D036)

This code also includes points regarding academic motivation and a lack of student participation. The majority of participants saw their students' academic level, which they regarded as insufficient and confused, as the root of their teaching problems. Most of them stated that they did not know how to handle the diversity among the student population, or they did not know what methods to apply (Borko, 2004) when giving their classes. We conclude, therefore, that if these are typical views of those held by novice staff in Spanish universities, then there should be a serious effort to prepare novice academics to teach classes with a high degree of heterogeneity.

In sub-code 4.3 (Information and communications technology [ICT] and reduction of personal contact), the participants expressed their fear that the use of ICTs might weaken their personal relationships with the students. For instance, "I've realized that when we use the campus intranet for personal tutorials, the relation is cold and impersonal. Really, I prefer face-to-face conversations with students, to find out what difficulties they have and help to overcome them" (D010); and,

In virtual tutorials they can ask you things and you can answer but without knowing whether they understand or not, I prefer to have the students in front of me when they have questions to ask, and I can ask them, "Do you understand?" or I can see the expression on their faces. (D040)

Sub-code 4.4 (Dilemma in the teacher's role) subsumes lecturers' doubts and uncertainties as to whether they are too "demanding" or over-friendly towards the students. For example, "Sometimes, I actually feel that I'm too close to them, that there might be consequences" (D025).

Descriptions of relations with departmental colleagues are included in code 5 (Relations and tensions with colleagues), where the most important avenues for improvement of professional interaction (planning, trust etc) are grouped together. This code is divided into three sub-codes, the results of which are shown in the Appendix.

In the novice academics' opinion, planning was the key element to be improved in their relations with their colleagues. They emphatically insisted on the lack of course planning or the distribution of content among different subjects, the organization of practical work, and so on. For instance: "My experience was. . . It was a very badly-planned and badly-organized subject" (D022); and, "As to negative aspects in university teaching, it's course planning. . . Content is repeated. . . and the students feel that the same things are taught over and over again, and they never get anywhere" (D015).

In summary, new academics' see their interpersonal relations with their departmental colleagues as lacking in interdependence and planning in the organization of different subjects: "I don't see much planning" (D053). This phenomenon was perceived as a problem in teaching progress because, for example, there was overlapping content among subjects or practical tasks are even repeated, all of which had a negative effect on students' learning. The low percentage in sub-code 5.2 (Trust among colleagues) suggests that no real collaborative culture was experienced and that the university lecturer still worked on his or her personal island of knowledge. For instance, one participant noted: "You have to adapt to what the professor wants you to teach and how he wants you to teach it, that's a problem, you have no freedom" (D014). The participants mentioned, also, albeit with a fairly low percentage in sub-code 5.3, the existence of certain tensions in departmental relations, "absurd vendettas" (D003). These findings confirm the "most salient and pervasive source of dissatisfaction" (Turner & Boice, 1989, p. 55) among novice academics where their colleagues were concerned and suggest that isolation was the most frequent element in the process of induction into the university setting (Barlow & Antoniou, 2007).

Research Questions 3

Research question 3 was: "What have you found necessary and lacking in your development as university lecturers?" Finally, in response to the third research question, the participants expressed their views on their needs, which would help them in reducing the difficulties referred to in the first two research questions. Two codes emerged here: codes 6 (Academic needs) and 7 (Development needs).

The demand for advice and orientation both in teaching and in research and institutional work is striking. Sub-code 6.1 (Mentoring) is particularly noticeable with the highest frequency of perceived need. Many participants felt that they needed a university lecturer-model, or someone who could advise them when they started their teaching and academic careers, as the following narrative makes clear:

I think it would be a good idea to create the figure of tutor for novice lecturers, a person who has worked for some time in the university and could act as a “guide” so that the adaptation period could be as short as possible. (D001)

The participants also identified teamwork in university teaching as being highly relevant. Sub-code 6.2 (Teamwork with colleagues) shows a greater percentage of instances. The following extracts portray the demand in this category: “Here we seem to live on islands with spaces in between. . . . I think relations with other people are fundamental” (D043); and, “Colleagues’ comments provide more than the teacher himself can in training courses” (D051).

Code 7 (Training needs) integrates what were seen as essentials in lecturer training, and refers basically to a demand for didactic and pedagogical training and also for preparation for research activities. Sub-code 7.1 (For teaching) shows a greater percentage of instances than the rest of the sub-codes that constitute this topic. The novice lecturer perceived a lack of initial teacher education: “A huge gap” (D048); and, “Gaps, yes, a lot” (D004). The gaps referred to by the participants include a lack of pedagogical teacher training. The novice academics demand initial training which would help them, for instance, to “learn about methodologies that can be used in class,” “acquire communication skills” in order to make better contact with students or manage classes. Some participants even explicitly suggested initial training for all university staff and the urgent creation of an “advisor or mentor for those starting in the profession.” This is reflected in the following narratives: “A lack of training for teaching. . . . There’s no guidance of any kind, nothing whatsoever” (D041); “Pedagogically they could help us a bit more” (D036); and,

I think there should be more training to be a teacher. I mean, how to handle a class . . . when you have to start teaching you feel that things have changed a lot since you were a student. So I think you should be given some guidance as regards the pedagogy. (D019)

Faced with this unsatisfied demand for training, these novice academics resorted to their own personal

effort and day-to-day experience in the profession (i.e., trial and error). The participants described how they constructed their own teaching expertise through their individual experience, which after a while they defined as “autonomous self-help.” The demand for training in subject content was lower. The emergence of sub-code 7.3 (Criticism of the training received) shows how they critically questioned the guidance they received; in some cases, in the context of teaching praxis which they considered to be highly theoretical and separated from the reality of the learning process: “I always say that my best teachers are my students, . . . rather than important lecturers, and much more than professors” (D049). They therefore demanded proper professional development. For example: “I think the most important thing for a university lecturer is commitment, but perhaps it is necessary to have a professional base, and I lean towards professionalization” (D053).

Conclusion

The participants’ points of view and thoughts as a whole enabled us not only to identify and contextualize their difficulties and concerns, but also to know the reasons of their worries, fears and dilemmas. In many cases, it is possible to discern the contradictions between the indelible memories left on them by the system they experienced as students and the new teaching perspectives they are now discovering (Flores & Day, 2006).

The participants showed considerable concern about a lack of proper preparation, command and explanation of subject content (code 1), and about their students’ academic level (sub-code 2.2), in particular as regards a lack of basic knowledge. Similarly, in their relations with their colleagues they found that there was a serious lack of coordination in the organization of content into subjects (sub-code 6.1). If we compare these data with those of lower reference in sub-codes 4.3 (ICT and reduction of personal contact), 4.4 (Dilemma in the teacher’s role), 5.2 (Trust among colleagues), or 6.2 (Teamwork with colleagues)—all of which refer to the need for interaction for good teaching praxis—we discover a view of teaching predominantly focused on the transmission of knowledge and a concept of learning as an individual rather than social process. This does not fit well with the needs 21st century learners do have, within the context of the information and network society.

In their relations with their colleagues, they also referred more to coordination than trust and, where support is concerned, they referred more to the figure of the mentor as a model, rather than to the possibility of learning networks. Finally, although they demanded more teacher education, a far smaller proportion of the participants demanded that such training should be critically and reflexively related to the context.

This traditional view of teaching may be the reason why early experience in the university teaching community can be filled with fear and uncertainty for novice lecturers. We have found expressions like: “I was very afraid, I had a terrible time because I felt that I was not in control. . . . I felt very insecure” (D055); “The insecurity when you teach your first classes” (D050); “Failed attempts” (D025); and, “The first year of teaching was very hard” (D038). Together with these fears, a large proportion of the narratives also contain a demand for support and guidance: “You’re always looking for a subjectively ideal [teaching] model among your colleagues” (D042); and, “I certainly needed someone to tell me more or less how to maintain the rhythm of the class” (D021). Nevertheless, although the previously-received view of the teaching model is maintained, there is also evidence of a willingness to approach a model more in agreement with the community-learning concept: “I want to ask [the students] how they see me as a teacher and try to improve” (D020); and, “In my view, being a university teacher means commitment to the students . . . [and] being concerned about the way you teach your classes” (D016).

The observed contradictions clearly show that novice teachers’ professional development requires considerable reconceptualization, in spite of the efforts made by university institutions in Spain. Conclusions from this research reinforce our conviction that individualized in service training models are unsatisfactory. Social networks and participation in learning communities are required in order to avoid isolation, eliminate fear and promote well-grounded professional development, since the community is an intrinsic condition for professional teaching knowledge (Lieberman & Pointer-Mace, 2009; Lieberman & Wood, 2002). This last aspect, pointed out by Whitcomb et al. (2009), can boost considerable changes in the lecturers’ knowledge. While it has been generally believed that in basic university training the mentor should supervise learners’ beliefs and practices (Marcelo, 2008), today’s collaborative culture creates a richer, shared environment in which distances disappear and relationships are fostered. Thus, the current culture in professional development favors the formation of shared learning spaces in which distances between academics and students are less pronounced and relationships are given importance (Johnson & Johnson, 2009).

Finally, as Flores and Day (2006) held, it is necessary that university novice teachers’ training should be mainly focused on their workplace conditions and situations, as well as on their centers and departments’ culture. We are referring to a reflexive approach in which an integrated learning concept

focused on the ego, the other and society as a whole (Glass & Rud, 2012; Nussbaum, 2006).

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MARCOS J. IGLESIAS-MARTINEZ is a PhD in Educational Sciences. He is a lecturer in the Department of Didactics and School Organization at the University of Alicante, Spain. He is an expert in training in initial teacher education and teacher's professional development in the higher education field. He has participated as the coordinator of the program for training lecturers in higher education at the Institute of Education. His research contributions have been published in several journals such as *Revista Educación XXI*, *RED-U*, *Revista Iberoamericana de Educación*, and the *Journal of Human Sport & Exercise*.

INÉS LOZANO-CABEZAS is a PhD in Educational Sciences. She is a lecturer and academic secretary in the Department of Didactics and School Organization at the University of Alicante, Spain. She is dedicated to teacher education research in the higher education field: teacher quality, curriculum design/development, teaching in community and school networks and in universities. She has participated in a program for

training lecturers in higher education at the Institute of Education. Her research contributions have been published in several journals such as *Revista Educación XXI*, *RED-U*, *Revista Iberoamericana de Educación*. MARÍA A. MARTÍNEZ-RUIZ is Professor of Education at the University of Alicante, Spain. She was awarded a PhD from the University of Salamanca. She has been head of department (1996-2001), head of the Institute of Education (2001-2008) and is currently the Dean of the Faculty of Education. She assumed the direction of the doctoral program in Educational Research in 1995. She leads an interdisciplinary research network, formed for *senior* and young researchers and dedicated to teacher education research in the higher education field. Her research contributions have been published in several journals such as the *British Journal of In-service Education*, *Teacher Development*, *Teaching and Teacher Education*,

Learning and Instruction, *Mentoring & Tutoring*, and other Spanish journals. Her work as editor of a relevant number of books and CDs about educational research at the university level has been well recognized (a collection of 14 CDs and 16 books).

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Appendix
Summary with Codes, Cub-Codes, and Examples

CODES	EXAMPLES
1 Difficulties in course planning <i>This code inquiries into the difficulties the professor has in course planning.</i>	
1.1 Content preparation Difficulties in course content preparation	I felt that I was not in control of the contents. (D055)
1.2 Materials preparation Difficulties in preparation of teaching materials	The first difficulty is when you face something new, that is, new subjects, to program a new material. (D017)
1.3 Time scheduling Problems with time scheduling regarding class planning	I don't know how far I can distribute a class hour. (D021)
2 Problems in teaching praxis <i>This code analyzes the problems of everyday work: the implementation of course plans and actual classroom praxis.</i>	
2.1 Personal teaching skills Lack of skills or confidence in teaching	A lack of training for teaching. (D041)
2.2 Student-teacher ratio High student-teacher ratio	Many students in class. It's horrible! (D011)
2.3 Infrastructures Lack of resources and infrastructures	I have always three students by computer! (D060)
2.4 Theory and practice Student problems in linking theory and practice	They do not see the utility theory to practice. And that's a problem. (D024)
2.5 Usefulness of the subject Student rejection towards theoretical subjects	Students discuss the validity of the subject. (D018)
3 Assessment difficulties <i>References to difficulties in the evaluation process</i>	
3.1 Amounts of work Excessive amounts of correction and evaluation work	Assessment is horrible, horrible corrected for the volume and the amount of practice. (D057)
3.2 Objective Difficulty in being objective	I always think I'm being unfair. (D035)
3.3 Complexity Conscious of lack of evaluation competences	Assessment is very complicated. (D010)
4 Student/group-class problems <i>Deals with narratives concerned their relationships with their students within the framework of their professional development.</i>	
4.1 Classroom atmosphere Problems maintaining a good classroom atmosphere	Every year at least one student who questioned my figure and my authority in the classroom. (D042)
4.2 Students' academic level Students' academic level regarding the course content	I like that much better prepared students come to the University. (D040)
4.3 ICT and reduction of personal contact The lessening of personal contact with students due to ICT	With the use of the virtual campus and mentoring, the relationship continues to be cold and distant. (D010)
4.4 Dilemma in the teacher's role Dilemma regarding the teacher's role in the teacher-student relationship	I don't know how I can dominate the relationship teacher-student. (D030)
5 Relations and tensions with colleagues <i>Deals with narratives concerned with the relationships with their staff colleagues within the framework of their professional development.</i>	
5.1 Planning Lack of co-ordination in organizing and planning of teaching	I don't see much planning. (D053)

5.2 Trust among colleagues Mistrust among colleagues regarding work performance	Colleagues think that we are students or scholarship. (D038)
5.3 Departmental tensions Departmental /Faculty tensions and/or conflicts	The existence of certain tensions in departmental relations, “absurd vendettas” (D003)
6 Academic needs <i>This code analyzes narratives which refer to the academic needs in their development as university new staff.</i>	
6.1 Mentoring Requests for academic mentoring	Advisor or mentor for those starting in the profession. (D001)
6.2 Teamwork with colleagues The need to foster teamwork with colleagues	We need rather than to the possibility of learning networks (D044)
6.3 Global academic information Demand for global academic information	I want to know more information new teaching-learning in the European Higher Education Area (D025)
7 Training needs <i>This code analyzes the narratives that refer to a demand for didactic and pedagogical training and also for preparation for research activities.</i>	
7.1 For teaching Lack of teaching competence	Pedagogically they could help us a bit more. (D036)
7.2 For research Lack of research competence	The field of research is very difficult for me. (D047)
7.3 Criticism of the training received Criticism of the training didactic and pedagogical	I've been to some theoretical and practical courses, but very little theoretical and practical, and then I still have that gap. (D033)
7.4 In subject content Lack of adequate knowledge regarding subject content	Sometimes I missed a university curriculum. (D059)

Impromptu Learning: Unplanned Occurrences, Intended Outcomes

Julián Jefferies and Angela-MinhTu Nguyen
California State University, Fullerton

During a study abroad experience on the island of Vieques, Puerto Rico, participants found themselves in an “impromptu learning experience” that extended their learning beyond Puerto Rican culture to real-world debates of tourist development, environmental issues, and the struggles of the native population. In this paper, we introduce impromptu learning: an unplanned experiential learning experience, triggered by a significant and personalized incident, that engages, invigorates, and mobilizes students to seek further learning and knowledge. We used qualitative data in the form of interviews and students’ journals to describe and elucidate the characteristics of impromptu learning. Implications of these experiences and their potential for making study abroad as well as learning in other contexts more student-led and more effective for critical consciousness are discussed. In addition, recommendations for supporting and promoting impromptu learning experiences are provided.

*No me regalen más libros
porque no los leo.
Lo que he aprendiedo,
es porque lo veo.*

Don’t give me any more books
Because I don’t read them.
Everything I know
Is because I’ve seen it.
(Joglar, 2010; the song “La Vuelta al Mundo”/“Around the World,” performed by Calle 13)

An important goal in teaching is to transform the learning experience for students and to transform the students themselves (Mezirow, 1997). That is, teachers strive to encourage and challenge students to engage deeply in course material, to step outside their comfort zones and become receptive to novel ideas and multiple perspectives, and ultimately, to direct their own learning and seek further knowledge. Therefore, it is not surprising that many teachers have embraced and integrated experiential learning, whereby students acquire knowledge through new experiences and observations (Kolb, 1984), into their lesson plans. However, the most powerful learning experiences cannot be planned; they occur serendipitously. These impromptu learning experiences allow students to expand their horizons and become empathic, conscious global citizens. Although when and how these experiences occur cannot be controlled, teachers can capitalize on them and maximize their learning benefits by providing students with freedom to explore, opportunities to reflect, and tools to further understand their experiences. In this paper, we expand on the experiential learning literature by introducing the concept of *impromptu learning* and its potential for making higher education more student-led and more effective for critical consciousness. We illustrate this concept with a study-abroad incident and offer

recommendations for supporting and promoting impromptu learning experiences.

According to Freire (1997), the goal of education is to achieve “critical consciousness” which involves “reflection and action upon the world in order to transform it” (p. 8). Unfortunately, classroom spaces, due to their scripted nature, the onset of assessment and standards, and the vertical relationship with teachers and students, tend to reproduce what Freire (1997) described as the opposite of critical consciousness, or “the assumption of a dichotomy between human beings and the world: a person is merely *in* the world, not *with* the world or *with* others; the individual is a spectator, not re-creator” (p. 56). The problems and challenges presented in a classroom environment do not seem urgent or personal, and the high degree of abstractness makes it difficult for students to relate to the material.

Based on works by Paulo Freire and other scholars, such as Kurt Lewin and John Dewey, Kolb (1984) developed *experiential learning* theory, proposing learning as a process whereby the learner encounters multiple and often contradictory perspectives from interacting with the environment, leading him/her to refine original beliefs and develop new ones. Because experiences coupled with reflections lead to better critical thinking skills, deeper processing, and longer retention of information, experiential activities have been incorporated into many lesson plans and academic programs (Wehbi, 2011). In the past few decades, learner-focused and experience-based education, such as service learning, simulation exercises, role plays, collaborative learning, internships, and field work, have surged in popularity (Cramer, Ryosho, & Nguyen, 2012; Wehbi, 2011). Experiential learning opportunities are usually formal, planned, intentional, and/or prescriptive. For example, students participating in internships or service-learning projects may be instructed to volunteer at an organization or in the community for a set amount of time and to document their experiences and

observations in a journal or diary (e.g., Craig, 2010; Mealman, 1993). The learning that occurs is predetermined, structured, and institutionalized (Eneroth, 2008; Malcolm, Hodkinson, & Colley, 2003; Williams, Karousou, & Mackness, 2011).

In addition to these formal means, experiential learning (i.e., learning through experience) may also be informal, unplanned, unintentional, unstructured, incidental, and/or accidental. *Informal* or *unplanned learning* is learning through everyday life rather than in a structured educational setting from a formal teacher with pre-specified learning objectives (Bourner, 2009; Eneroth, 2008; Jurasaitė-Harbison, 2009; Malcolm, Hodkinson, & Colley, 2003). For example, informal learning may occur through casual conversations with peers. At a more specific level, *incidental learning* is informal, unintentional learning from an event or incident (Kerka, 2000; Mealman, 1993). That is, an event may have the purpose of acquiring knowledge of topic A, but the learner also accidentally acquires knowledge about topic B. Examples include learning by making a mistake or learning through networking. Incidental learning is related to learners' improved mastery of material, interpersonal relationships, self-confidence, and self-awareness (Kerka, 2000; Mealman, 1993).

Impromptu Learning

Current conceptualizations of experiential, informal, or incidental learning do not capture the emergent or transformative learning that occurs from frequent and open opportunities to interact with other people and the environment, especially in the context of study abroad programs. To address this theoretical gap, we propose a specific type of incidental learning that is triggered by a significant and personalized event and serves as a catalyst for further learning: impromptu learning. (See Figure 1 for the placement of impromptu learning within the context of incidental, informal, and experiential learning, and Figure 2 for an illustration of the impromptu learning process.) The triggering event must be "significant" in that it shatters and changes the learner's original worldview. In other words, it shifts the learner's perspective and provides the learner with an epiphany. This event may be considered a disorienting dilemma, which is a crucial step in the process toward critical consciousness (Freire, 1997) or perspective transformation (Taylor, 1997). The triggering event must also be "personalized," such that it engages the learner, forcing him/her to adopt a perspective and have an opinion.

Figure 1
Impromptu Learning as a Specific Form of Incidental, Informal, Experiential Learning

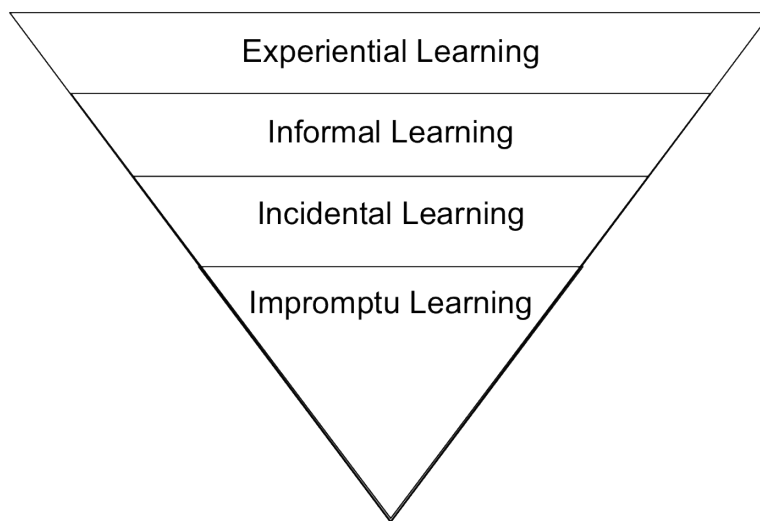
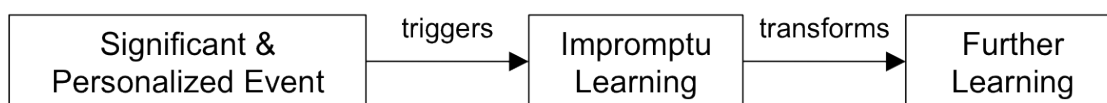


Figure 2
Impromptu Learning Process



The effect of impromptu learning is that it transforms the learning experience; it engages, invigorates, and mobilizes the learner. The impromptu learning experience engages the learner by becoming a part of him/her, pre-occupying his/her thoughts and showing up in conversations in and out of class. Consequently, the learner is invigorated, with a renewed interest in learning. Finally, with this surge of interest and enthusiasm, the learner uses the impromptu learning experience as a focus or point of departure from which future learning and interactions occur. In other words, impromptu learning experiences motivate further learning, with the learner seeking knowledge and information from a variety of sources: teachers, peers, observers, and strangers.

Drawing on experiential learning theory (Kolb, 1984) and transformative learning theory (Mezirow, 1997)—both of which were heavily influenced by Freire (1997)—a key element of impromptu learning is critical reflection, whereby the learner becomes aware of and evaluates his/her thoughts, ideas, and assumptions. As a form of experiential learning (Kolb, 1984), the catalyst for impromptu learning is experience, or more specifically, a significant and personalized triggering event. As a form of transformative learning (Kitchenham, 2008; Mezirow, 1997; Taylor, 1997), there is a change in the learner's frame of reference or meaning perspective. However, with impromptu learning, the perspective that is altered is specific to the learner's attitudes toward the process of learning itself.

Impromptu learning can occur any time a student steps outside the four walls of a classroom and into an unfamiliar situation in which he/she fully interacts with others and the surroundings. In other words, impromptu learning may happen every time a student ventures outside his/her comfort zone and participates in a community to which he/she does not belong. These impromptu learning experiences may even arise during more traditional experiential learning activities such as internships, field experiences and service learning opportunities. It is important to note that in some cases, impromptu learning can also occur within the classroom via conversations, interactions and demonstrations (see Longfield, 2009). Moreover, everyday life in a student's hometown can potentially give rise to impromptu learning. As such, impromptu learning is relevant and applicable to a wide range of disciplines, from humanities and the social sciences to mathematics and the natural sciences. The key is to encourage students to always be learners, and to have open ears, eyes, and mind.

One of the most ideal—albeit not the only—fertile environment for impromptu learning is study abroad. Study abroad can provide many opportunities for impromptu learning, allowing students to observe novel

occurrences, reflect on these observations, and process them in formal and informal ways. When living abroad, students may encounter different cultural norms, values, and behaviors throughout each day. These new and different situations offer prime opportunities for students to learn in an unstructured, unrestricted, and independent way. For example, walking through early morning markets may allow students to learn about relations-based economic systems, gender roles in the household, and class inequalities. Many of the experiences are unsettling, making students uncomfortable and causing them confusion, which is “an ideal state for learning” (Savicki, 2008, p. 4). This confusion is similar to the concepts of Piaget's cognitive disequilibrium or cognitive conflict (as cited in Longfield, 2009) and cognitive dissonance (Elliot & Devine, 1994; Festinger & Carlsmith, 1959), whereby learners are motivated to change a perspective or adopt a new attitude after being confronted with opposing or discrepant ideas. Aware of these benefits, higher education institutions are investing more in study abroad programs: they benefit students personally, emotionally, academically and professionally. For example, those who studied abroad had increased international awareness, international political concern, cross-cultural interest, cultural cosmopolitanism, prosocial attitudes, empathy, and personal growth (e.g., Carlson & Widaman, 1988; Ryan & Twibell, 2000; Tremethick & Smit, 2009).

Illustration of Impromptu Learning: Study Abroad in Vieques, Puerto Rico

To further explain the concept of impromptu learning, we will describe an impromptu learning experience at Bio Bay in Vieques, Puerto Rico, for students in the Caribbean Studies Summer Institute (Capetillo & Galanes, 2011). Although undergraduate students may be well-versed theoretically in concepts such as neocolonialism, tourist development, and environmental protection, impromptu learning experiences expose them to real-life, “on the ground” examples of these abstract concepts, providing them a deeper understanding of these complex issues. The impromptu learning experience at Bio Bay highlighted for students the complicated relationship between tourism and the local population.

Caribbean Studies Summer Institute

The Caribbean Studies Summer Institute was developed by the University of Massachusetts, in partnership with the University of Puerto Rico at Cayey and California State University, Fullerton, to help students to understand the socio-political, economic, and cultural dynamics of the Caribbean (e.g., Puerto

Rico, St. Croix, St. Thomas, St. John). It offers students an interdisciplinary (sociological and anthropological) approach to understanding Caribbean societies and cultures “where emphasis is placed on the idea of the Caribbean as a natural laboratory of cultural and ethnic diversity, and the study of the historical, socio-political and economic structures and processes that helped shape the Caribbean as such” (Capetillo & Galanes, 2011, p. 2). It combines class lectures, local guest lecturers, field trips, and daily opportunities to interact with locals. Additionally, students’ encounter cross-cultural differences among themselves because program participants come from different regions of the US and Puerto Rico.

Vieques, Puerto Rico

The physical location of the Caribbean Studies Summer Institute varied from week to week (or even day to day), but the most memorable week was spent on Vieques. Vieques is a small island that is 21 miles long and 4 miles wide, consisting of 33,000 acres (roughly twice the size of Manhattan, NY) and approximately 10,000 inhabitants (*viequenses*), thus earning it the nickname of *La Isla Nena* (Cruz Soto, 2008; García Muñiz, 2001; McCaffrey, 2006). With 65% of the population living in poverty, Vieques is one of the poorest municipalities of Puerto Rico, which is a non-sovereign territory of the US, whose inhabitants are US citizens and can serve in the armed forces, but do not have representation in Congress and cannot vote for president (McCaffrey, 2011). As such, Vieques is also known as *la colonia de la colonia*, or “the colony of the colony” (Grusky, 1992).

Although many tourists know Vieques for its pristine beaches, untouched by modernization and industrialization, few are aware of the historical tension between the U.S. Navy and locals, or the toxic contamination of land and water, and consequently, the alarming cancer rate on the island (i.e., 27% higher than that of the Puerto Rican mainland; McCaffrey, 2002). In the 1940s, the U.S. Navy occupied the western and eastern ends of the island, displacing many *viequenses* from their homes and forcing them to move to the center of the island. After decades of the Naval military exercises, including “artillery and small arms firing, naval gunfire support, and missile shoots” (McCaffrey, 2002, p. 14), “contamination from heavy metals and other toxins pose major environmental and health concerns” (McCaffrey, 2009, p. 35). In addition to increased rates of cancer, *viequenses* also suffer from higher rates of asthma, skin conditions, kidney failure, vibro-acoustical cardiovascular disease, and infant mortality (Baver, 2006; García Muñiz, 2001). These issues led to a *viequense* uprising, which became more heated after April 1999, when a Navy jet mistakenly

bombed a military observation post, killing David Sanes Rodriguez, a civilian employee and native of the island (Baver, 2006; McCaffrey, 2006). These mass protests successfully resulted in the Navy’s departure in 2003, but many of the *viequenses*’ problems still persist.

Bio-Bay Incident

While on Vieques, students listened to guest lectures from local leaders, discussed academic readings, wrote journals and papers, visited art exhibitions, watched documentaries, participated in guided tours of the island, and interacted with *viequenses*, but nothing was as powerful in teaching students about the socio-political, economic, and cultural milieu of Vieques as an incident at Bio Bay. Bio Bay (officially known as Mosquito Bay) is a bioluminescent bay, a natural national landmark, and a major tourist attraction. Due to its popularity, the Caribbean Studies Summer Institute arranged annual Bio Bay excursions with *viequenses* who had established informal businesses as tour guides. In 2012, however, students had a different experience than in prior years, triggering an impromptu learning experience.

When students arrived with kayaks, an officer of the Departamento de Recursos Naturales y Ambientales (DRNA; Department of Natural Resources and Environment) intercepted their entry into Bio Bay. This officer, a *viequense*, demanded that the *viequense* tour guides show a permit authorizing them to bring tourists to the Bay. When the tour guides did not provide one, the DRNA officer cited them for breaking the law. What ensued was a heated confrontation between the officer and the tour guides, one that the students were able to experience up-close and one that they would not soon forget. This incident impressed strongly upon the students, prompting debates about the meaning of this event among themselves, with professors, and with locals. They wrote about it in their journals and as part of their term papers. Using this incident, we define impromptu learning experiences and their potential for transformative learning, drawing implications for understanding the learning that can happen from formal or informal experiential pedagogy.

Method

Participants

There were 16 students enrolled in the Caribbean Summer Studies Institute. Of these, 15 agreed to participate in the study: 13 students from across the US (Boston, MA; Los Angeles, CA; Dallas, TX; New York, NY) and two students from Puerto Rico. The

sample was 80% female, with an average age of 22.54 ($SD = 2.57$). Racially and/or ethnically, the sample was comprised of two Cape Verdean Americans, one Haitian American, one Caribbean (from Martinique), five Latino(a)s, two Puerto Ricans, one Dominican, one Salvadoran, one Colombian/Panamanian, one Asian/Pacific Islander American (Korean American), and five White/Anglo Americans (of Italian, Irish, or mixed ethnic origin).

Data Collection

Using an ethnographic methodology (Brewer, 2000), the first author gathered data during the daily routines and events of the Caribbean Studies Summer Institute in June 2012. By focusing on the “social meanings and ordinary activities” of participants in “naturally occurring settings” (Brewer, 2000, p. 9), the first author attempted to describe a more personal and in-depth portrait of the participants during their study abroad experience. Three types of triangulation were used in order to ensure that the account is robust, rich and comprehensive: methods triangulation, triangulation of sources and analyst triangulation (Patton, 2000). For the data collection, methods triangulation was used, as data was gathered by different methods such as participant observation, interviews and journals.

Participant observation. The role of the first author in the Caribbean Studies Summer Institute allowed him to observe and participate in activities with students, such as residing among them in hotels and dorms, sharing in meals, and driving them on field trips. The data reported here are from his second year acting as a coordinator of activities, instructor and curriculum developer. This level of involvement allowed him as a participant observer to “collect and record data as needed” and “obtain feedback about observations and tentative conclusions from the people in the research study” (Johnson & Christensen, 2012, p. 209). The first author’s role was that of an intervening participant who engaged in dialogue with participants; thus, data collection was shaped by his identities and personal history: a English-Spanish bilingual White Latino from Argentina, who had lived in the US for 15 years and had visited the Caribbean five times. Because the first author did not accompany students to Bio Bay, much of the participant observer data was gathered after the incident. Starting the night that student returned from Bio Bay and throughout the subsequent weeks, the first author overheard students discuss the event and give different interpretations of what happened. He sometimes participated in these discussions, either one-on-one with students or in groups, but rarely with all the students at the same time. He recorded the content of these conversations in detailed field notes.

Student interviews. During the last week of the program, the first author conducted semi-structured interviews with individual students. The interviews lasted between 30 and 40 minutes, during which he asked students to reflect on how learning via experiences during the program differed from classroom learning, what surprised them the most about the study abroad experience and which experience they remember most vividly. In the first round of interviews, 12 of 15 students talked about the incident at Bio Bay as the most significant example of learning that had occurred outside of the classroom, prompting the first author to ask follow-up questions regarding the students’ interpretations of the event; their discussions with peers, locals, and faculty members after the event; and the impact of this event on the rest of their trip. In a second round of interviews that occurred after participants had returned from the program and after having conducted preliminary analysis of the data, the first author asked follow-up questions about issues that he had noticed in the first interview. In this way, the methodology of this study is grounded in participants’ own words and experiences. However, to protect participants’ confidentiality, their names were modified.

Student journals. As an assignment for one of program courses, students wrote journal entries on experiences that they found novel, surprising, and/or interesting. In these entries, students were encouraged to describe the situation they observed, reflect on it, and give an interpretation of the event in light of the readings and theoretical frameworks given in the reading. These journals were collected and analyzed at the end of the program.

Data Analysis.

To analyze the data, the authors read the data sources and recorded themes that emerged across participants. Due to the number of students who mentioned the incident and the energy and enthusiasm generated by it, the authors decided to focus on the Bio Bay incident and its pedagogical significance. From the content analysis of these data, codes emerged regarding the consequences of students’ experiences at Bio Bay: the ways in which it engaged them, invigorated their learning, and mobilized them for future learning. Thus, the authors that there was a new type of learning experience not yet conceptualized in pedagogical and research literature.

The data analysis was triangulated in three ways: methods triangulation, triangulation of sources and analyst triangulation (Patton, 2000). In the first, authors checked the consistency of findings through participant observation notes, interviews and journals. Second, the researchers examined the consistency of data sources at

different points in time during the program. For example, the students' impressions of the Bio Bay experience were analyzed a day after the experience (in participant observation notes), 2 weeks after (in interviews) and a month later (in her journal). For analyst triangulation, both authors analyzed and discussed the creation of codes and themes.

Results and Discussion

From the data collected, we were able to identify the characteristics of impromptu learning as: (a) caused by a significant and personalized event, (b) engaging students, (c) invigorating them, and (d) mobilizing them to organically seek further learning and knowledge, making the curriculum learner-focused and student-led.

Significant and Personalized Triggering Event

Impromptu learning is spontaneous, serendipitous, on-the-spot learning that is most likely to occur when learners are faced with new, messy, complex and challenging situations or situations filled with conflicts and differences. During study abroad experiences such as this one, students may encounter many informal and incidental learning experiences, as they observe the practices, behaviors and situations that are foreign or novel to them. Impromptu learning experiences, however, occur when those situations are significant and personal for students. Because what transpired between the tour guides and the DRNA officer affected students' access and ability to enjoy the natural wonder of Bio Bay, they could not ignore this event. In the words of a student, the Bio Bay incident was "the most shocking. If you were there, you couldn't help [but] pay attention to this, this massive conflict that arose very quickly, organically" (Alex, male, Caucasian, 25 years old).

Many students are law-abiding, conceding power and the determination of right vs. wrong to authority figures, such as government officials. This event was significant in that it turned students' world upside-down, forcing them to at least consider the tour guides' perspective because they were after all, in the tour guides' vans. After considering both perspectives, students had to take a side: Would they side with the tour guide, a local breaking the law to try to make a living from showing the island's beauty? Or would they side with the government official, imposing restrictions for the sake of the environment and selectively limiting the number of tour agencies into Bio Bay? The impact of this impromptu learning experience was evident in the remaining weeks of the study abroad program, changing and transforming the way students learned.

Transformation by Engaging Students

The Bio Bay encounter between the DRNA officer and the tour guides had the power to more deeply engage students in course material, thus transforming their learning experience. Prior classroom discussions and lectures about the effect of both the U.S. Navy and tourist development on Vieques had theoretically introduced students to concepts of neo-colonialism and development, but this event played a role in personally engaging students in the issue. It gave the topic a sense of urgency that it had never had before, making the problems of economic development, unemployment, and access to resources in Vieques one that students embraced as their own. Impromptu learning serves to make material more real to students, allowing them to understand and interpret previously learned "book material" with a new perspective.

That's [the Bio Bay event] one of the examples of these kind things that you don't plan, but they stick with people—people's head—so much more than reading it in an article. How often do you remember the stories in a newspaper or everything you've read about something exactly like this from a week ago? . . . But I'm pretty sure that I'll never forget that. (Alex)

Through the event at the Bio Bay, students witnessed first-hand the themes discussed in the Caribbean Studies Summer Institute: neo-colonialism, tourism, and capitalism in the Caribbean. As a participant observer, the first author noticed how the theme of economic development, tourism, and the relationship between locals and tourist development became topics of heated debate during the remainder of the study abroad program. Students went from being interested in the issue from an outsider perspective to being thrust into the middle of the topic: having to take sides, convincing other people of their position and trying to change other students' opinions about the issue, searching for more information about the issue and making parallels between that situation and other situations.

Transformation by Invigorating Students

The Bio Bay incident energized students and made them excited to learn. The transformative nature of this impromptu learning experience is most evident in Sandra. Initially, she perceived tourism in the Caribbean to be a beneficial and important service to the people and economies in the region, but after the Bio Bay incident, Sandra began to empathize with the locals and see the world through their eyes, while also understanding the need for environmental regulation and environmental protection.

During student-initiated conversations after the Bio Bay incident, some viequesenses explained that they had tried to obtain licenses, but the licenses were extremely expensive, and the bureaucratic process to obtain them was difficult to maneuver. Sandra wanted to determine exactly how difficult or expensive it is for the residents to obtain a permit because the regulation of Bio Bay was important to her. She wanted to suspend judgment of the event until she found out more information about obtaining licenses:

I'm really encouraged to see how hard it is, and if it's expensive to get a permit. It's like a driver's license. It's a free country, and yes, you have feelings, but we still want you to, whether or not you're capable of driving a car, they still want you to go get a license. (Sandra, female, Caucasian, 22 years old)

Later in the interview, Sandra mentioned that she understood the perspective of the DRNA:

They are trying to protect [the Bio Bay]. It's been very effective for tourism; that's one of the main tourist attractions, so I could see how they want to keep that. With more access, it'd be more, I think motor boats are the biggest [issue]. Those engines turn up the water, and it kills a lot of things, so I understand. (Sandra)

As time progressed, Sandra's stance shifted to embrace both parties' perspectives, as written in this final assignment:

I believe that the DRNA should be concerned about the chance of the bioluminescent bay fading, but they are doing it the wrong way. They should be more concerned with people going out on it with motor boats which can bring direct harm to the bay, not a group of locally led tourists on kayaks. In the big picture, I believe that the Puerto Rico DRNA's goal of protecting the bay is a great plan, I just do not think that they are doing it in the right way and keep the locals and the tourists happy. (Sandra)

Sandra finds a way to reconcile the need for tourism for its economic benefits, the need to protect the bay, and the needs of the locals. In addition to renewing students' interest in learning, impromptu learning experiences also provides a point of departure for students to organize and direct their own learning.

Transformation by Mobilizing Students toward Further Learning

The most important transformational effect of impromptu learning is that it mobilizes and motivates

students to acquire further knowledge. The Bio Bay incident provided students with a framework through which to seek out and interpret their experiences during the remaining weeks of the Caribbean Summer Studies Institute. In these weeks, students became receptive to and acquainted with locals' perspectives, noticing and becoming interested in locals' opinions, initiating informal conversations with them, and developing their independent study projects from the locals' point of view.

For some students, the Bio Bay impromptu learning experience stimulated a desire to focus on tourism and capitalism for their independent study projects. One student noted:

I wanted to do something about American tourism companies, and how it's negative to the natives. A lot of the natives feel the way they do in terms of American tourists and how [tourists] treat them: how [tourists] ask you if they can . . . come for a few days [to] vacation on their land and go back home like nothing [at] all. These people in the island are struggling through the day to live. (Rachel, female, Caucasian, 20 years old)

Another student explained:

Vieques is a laboratory for how strong capitalism [is], existing in a place where you know it hadn't existed before. What happens with the Bio Bay? What happens with the restaurants? What happens with Esperanza? Whose town is it? Who is left? What do locals think? (Dexter, male, Caucasian, 22 years old)

As indicated above by Dexter's quote, the Bio Bay impromptu learning experience motivated some students to seek out interactions with locals to learn their perspectives. One student did so by accompanying a professor on interviews with cancer survivors on the island: "When I sat in on the interviews [with] the women [in] Vieques who were—both of them were—cancer survivors, I was just filled with so much emotion at hearing their stories" (Janine, female, Korean American, 22 years old).

From stepping outside their comfort zones and initiating conversations with locals, students were able to learn about issues beyond those covered in the Caribbean Studies Summer Institute. For example, Joanna, a 21-year-old from Cape Verde reared in Boston, took a risk and ventured out to learn more about gender issues in the Caribbean. In Esperanza, Vieques, she observed and was surprised that an 11-year-old girl dressed provocatively and walked around town in the evening when there were mostly men. To understand the girl's motivation and perspective, Joanna engaged her in conversation in Spanish:

I was able to talk to her. I was asking her what did she think about it. She was like. . . Her grandma raised her. It's traditional that they behave this way, a thing that has not changed over time.

Later, Joanna witnessed another girl (8 years old) in (what Joanna would consider) an inappropriately provocative dress. From a conversation with the girl's mother, Joanna learned that this is typical behavior. Consequently, Joanna chose the gender socialization of girls and young women in the Caribbean as the topic of her research project.

This commitment to further learning translated into a shift of perspective and the adoption of a framework through which participants interpreted their experiences and sought out information during the remaining weeks. In this way, impromptu learning experiences can transform the curriculum into student-centered model of learning where students are intrinsically motivated to seek out further knowledge, make additional observations and engage critically with the world.

As proposed earlier, impromptu learning is most likely to occur when learners encounter novel and complex situations, such as when conflicts arise. Experiences such as these require learners to observe and analyze the situation, and question and re-examine their own beliefs and assumptions (Alvarez & Rogers, 2006). As a result, they must accept, or at least, acknowledge that multiple perspectives and realities exist, and that what is "true" or "right" may be subjective. The Bio Bay incident allowed students to better comprehend the complexities surrounding tourism and economic development, as compared to when students learned about these topics via classroom activities and readings. As demonstrated in the student interview and journal entries above, students formulated their own meanings of the event, and multiple interpretations, narratives and arguments emerged and co-existed. Many of these interpretations even subverted the position put forth by instructors or academic literature. All in all, this experience exposed students to the messy and complex reality of tourist development "on the ground," from the perspective of locals.

Conclusion

Some informal learning experiences are so personalized, strong and alluring that they engage, invigorate, and mobilize students to learn more. In this article, we introduced impromptu learning as a new type of incidental learning and presented evidence for the impact of impromptu learning on future learning. Impromptu learning is powerful because it transforms learning, such that it becomes student-led instead of being directed by the program, a curriculum, or

professors. Impromptu learning experiences do not involve a teacher or a classroom, but rather, a situation that empowers students to find their own definitions and interpretations of problems, motivates them to ask their own questions, and affords them the opportunity to engage with the world as participants and not as mere spectators. As Freire (1997) suggested in his description of problem-posing education, "The students, no longer docile listeners, are now critical investigators in dialogue with the teacher" (p. 62), with their peers, and with viequenses. Impromptu learning experiences expose students to the world about which they are learning, and they cannot help but to see themselves as part of it, thus shifting their vision of the world:

Students, as they are increasingly posed with problems relating to themselves in the world and with the world, will feel increasingly challenged and obliged to respond to that challenge. Because they apprehend the challenge as interrelated to other problems within a total context, not as a theoretical question, the resulting comprehension tends to be increasingly critical and thus constantly less alienated. Their response to the challenge evokes new challenges, followed by new understandings; and gradually the students come to regard themselves as committed. (Freire, 1997, p. 62)

Because impromptu learning is a new pedagogical technique, further research is needed to evaluate its long-term impact on student learning. For example, a longitudinal study spanning 6 to 12 months may uncover whether the transformation and shift in perspective that occur in students translate into advocacy or activism for the topic at hand (e.g., tourism and economic development). A study such as this will determine whether impromptu learning can truly empower and prepare students to become agents of change and "responsible global citizens" (Lutterman-Aguilar & Gingerich, 2002, p. 43).

Recommendations

If impromptu learning experiences are unplanned, how can we foster them? Although we cannot plan impromptu learning experiences, educators who use experiential learning should encourage and plan for students to have opportunities to participate in unscripted activities, meet and interact with locals, and observe the new culture in various settings. These unplanned events are merely chance incidents unless reflection occurs; reflection is necessary for learners to process and garner knowledge from experience. Even though reflection can happen during formal learning activities, teachers need to acknowledge that it may also

occur informally and spontaneously, such as in impromptu discussions with peers over meals or when they unwind after a long day. It is the informal and unplanned nature of these impromptu learning experiences that turns instructor-led curricula into student-led curricula.

Although study abroad is the ideal environment for impromptu learning, impromptu learning can occur in any setting and in any discipline. For example, impromptu learning can be facilitated by experiences such as residential internship programs like the University of California Washington Center (UCDC) with a focus on political science, residential community service programs like AmeriCorps with emphases in education, the environment, and other areas, and immersion service-learning programs (Tremethick & Smit, 2009; Warner & Esposito, 2009). More simply, higher education professionals can foster impromptu learning by encouraging students to engage in social exchanges, interact with their environment, step outside their comfort zones and wander to unfamiliar places. In other words, the objective is to create experiential learning opportunities in which impromptu learning situations might occur. While aware of the potential safety hazards, students should be exposed to complicated, confusing, and overwhelming situations that challenge them and force them to adapt and learn. These experiences are in essence “lectures” or “lessons” (Eneroth, 2008). The teacher’s role is to create the conditions for these learning experiences to occur, and most importantly, to be attentive to when they occur in order to facilitate and support reflection. A crucial element of experiential learning is reflection; therefore, it is imperative that teachers reserve time for learners to discuss, process and transform their experiences into knowledge. Reflection may take the form of sharing experiences and telling stories in small group, or participating in facilitated large group discussions.

Implications

We are calling fellow teachers to limit formal learning experiences that students have in order to cultivate more incidental and unplanned learning, or impromptu learning. During these experiences, students enjoy the opportunity and freedom to make their own observations, generate their own hypotheses, engage in conversations with people who are different from themselves and guide their own learning, thus making the curriculum more student-centered. At the same time, it is the teachers’ responsibility to equip students with the methodological tools to make insightful observations and to ask appropriate questions that can elicit locals’ perspectives. As education is becoming increasingly scripted, with limited teacher creativity

and routinized classes due to excessive testing, we highlight impromptu learning as a powerful pedagogical experience, stronger than any formal class structure can offer.

One of the major implications of impromptu incidents is the pedagogical power of its effect on undergraduate students. The lessons of impromptu learning serve as a reminder of the transformative effects of a curriculum that is “taken over” by students (i.e., student-directed). In response, higher education teachers should find innovative ways to engage students in real-life problems that are contemporary and urgent. With the tenets of experiential and transformative learning in mind, teachers should remember to give students space and time to reflect on their own, create their own interpretations, and allow them to negotiate these multiple perspectives with each other. We urge educators interested in transformative pedagogy to re-evaluate their courses in order to integrate unplanned, incidental activities such as impromptu learning experiences. At the core, impromptu learning emphasizes that every experience, every incident, and every interaction can be a learning opportunity and has the potential to transform learning and learners themselves.

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JULIÁN JEFFERIES is an assistant professor in the College of Education at California State University, Fullerton. He is interested in the pedagogy of international and experiential learning opportunities, and coordinates a summer program in Puerto Rico and the Virgin Islands, where he looks to investigate how students gain cross-cultural competence and re-think their national, gender, ethnic, and cultural identities.

ANGELA-MINHTU D. NGUYEN is an assistant professor in the Department of Psychology at

California State University, Fullerton. Integrating her background in cultural, social/personality, and industrial/organizational psychology, she studies multiculturalism and intersectionality. She has conducted research on biculturalism, bilingualism, cultural intelligence, and transnationalism as they relate to the study abroad experience.

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Emerging Issues in the Utilization of Weblogs in Higher Education Classrooms

Shirley Ayao-ao

Saint Louis University, Baguio City

This paper examines the emerging issues in the utilization of weblogs in Philippine higher education and how these issues affect the performance of students. This study used a modified Delphi method. The Delphi panel consisted of 12 experts in the integration of technology, particularly blogs, in their teaching. The study yielded the following issues: (a) limited time and access to computer and Internet; (b) tedious preparation, maintenance and management of blogs; (c) technological difficulties of students; (d) low level of interaction among students; (e) digression in comments posted; and (f) not used to online teaching. These issues may curb the optimized benefit of weblogs as a teaching-learning tool. The results of this study also highly recommend the use of standardized assessment tools for richer academic contributions of weblog activities. The study presents enlightening insights on the place and function of blogging in the academe.

Learning is eclectic. It is not confined inside the four walls of the classroom. In our contemporary time, there are other unconventional learning platforms that teachers may explore and utilize to make learning meaningful for students. Tong and Trinidad (2005) observed that in the innovative classrooms, technology facilitated the interactions and connectedness between the students and the worldwide community.

Technology is ubiquitous in today's generation. Inevitably, it lends its mechanical arms to almost everything, including education. Technological advancements have provided the impetus for facilitating learning outside the typical classroom and for allowing more opportunities for skills development. Saeed, Yang, and Sinnappan's (2009) findings suggest that today's learners are flexible in stretching their learning styles such that they are able to accommodate varying instructional strategies including the use of emerging web technologies. They point out that the learners of this generation are flexible enough to explore varying technologies and that their technology preferences are not limited to a particular tool. Lending (2010) also recognized the importance of dealing with individual differences of students when she asserts that the learner-centered educational philosophy, which underpins the use of wiki in the classroom, puts the responsibility of learning on the students themselves.

With the emergence of Web 2.0, tools such as wikis and blogs, among others, have become unconventional learning media. Gunawardena et al. (2009) have identified that the essential features of Web 2.0 tools foster interaction, collaboration, and contribution. The study of Ennis and Gambrell (2010) revealed that majority of the students want to use blogs and podcasts for school-related purposes. In fact, Quible (2005) asserted that the use of blogs in the educational world will undoubtedly continue to expand rapidly. He adds that blogs will become a rich educational tool to create classroom activities.

Andergassen (2009) identified four major points that motivate students to blog, namely: writing and publishing on the web, testing the new technology, communicating with friends/family, and making social contacts in web platforms. Pineda (2007) mentioned some of the merits of blogs: they are used as springboard to tap student opinions and insights, as an extension of class recitation, and as a teaching/reference material. He specified that blogs are a rich instructional tool for the following reasons: ease of creation, accessibility of equipment, clear authorship and ownership of ideas, cost-effective overall outputs and a high level of participation among students. Other studies mentioned the following benefits: "weblogs and podcasts enhance . . . learning experience" (Ennis & Gambrell, 2010, para. 33); "blogging is an efficient approach to learning" (Goh, Quek, & Lee, 2010, p. 96); and "it helps in learning and thinking and offers a space outside of the class where students could 'meet,' creating a sense of community" (Sharma & Xie, 2008, p. 141).

Despite the many benefits, research has revealed that there are issues that need to be addressed in the utilization of blogs. One of these issues pertains to the competency of the educators in using weblogs. According to Quible (2005), the slowness with which blogs are being integrated into the classroom is probably not a result of instructors' reluctance to use them; rather, it is more likely a result of instructors' unfamiliarity with blogs and their almost unlimited use in the instructional process. Greener (2009) mentioned that the reluctance of role-modeling effective e-learning is about fear and anxiety, especially of being shown as incompetent in a class comprised of the net generation.

The unclear and varying purposes of weblogs also pose challenges in their utilization. The study of Leslie and Murphy (2008) revealed that the distinction between social and instructional purposes is often not clearly defined when using weblogs. They noted that in

many cases, students used blogging for social purposes and these were highly motivating in terms of continuing to blog; hence, considerable overlap exists between social and instructional purposes. Hemmi, Bayne, and Land (2009) found that along ways of writing and presentation of identity, the tutors were concerned about the nature and purpose of pedagogical blogging while the students had issues on the negotiation of identity and voice within the blog. They concluded that the volatile modes of online interaction enabled by the new social media perhaps sit uncomfortably within existing higher education practice.

Students' behavior toward the use of weblogs is influenced by the limitations emanating from the technology itself and by their educators' strategy in preparing them for online activity. The study of Sharma and Xie (2008) identified that the negative experiences of students in using blogs were attributed to lack of privacy and lack of structure in blogging procedures that resulted in frustration and decreased motivation to engage in the activity. Similarly, the research of Chuang (2010) revealed that students were faced with the dilemma of opening their work to a broader audience for the purpose of rich social discourse or of keeping their work within the safer closed network community. Students' unfamiliarity with the medium of blogging may have limited most of their reflective posts to sharing what may be considered surface statements about their learning (Leslie & Murphy, 2008). Huang, Huang, and Yu (2011) concluded that students were not able to meet the expectations in some online cooperative activities due to unfamiliarity with some functions. They asserted that, to achieve effective learning from online cooperative setting, some basic skills need to be taught and developed by educators. While Hanson, Thackeray, Barnes, Neiger, and McIntyre (2008) recognized the advantages of using Web 2.0 environment for health educators, they emphasize that there are still challenges as evidenced by disparities in Internet access and poor quality information.

This paper attempts to identify the emerging issues of utilizing weblogs among higher education classrooms by teachers. Specifically, this study aims to address the following problems: (1) the issues encountered by higher education teachers in the utilization of weblogs in the classroom and (2) the effect of these issues on the performance of learners in the class activities. It also includes relevant insights to educators on how blogs can be maximized in their teaching.

The theory of social constructivism and the concept of scaffolding are important considerations for this research. Powell and Kalina (2009) elaborated that social constructivism allows learners to construct ideas through interaction with the teacher and other students and that scaffolding, on the other hand, is an assisted

learning process that supports Vygotsky's zone of proximal development, or getting to the next level of understanding, of each student with the assistance of teachers, peers and other adults.

Orienting newcomers to technology, tools, and conventions of discourse and structuring participation for success can help them strengthen their efficacy and can make them more successful in their interactions (Gunawardena et al., 2009). If educators are confidently engaged with students as they integrate technology tools in their teaching, students will find more meaning and relevance in their learning activities. It is tapping into their interest; thus, it can propel forward their motivation to learn. Sim and Hew (2010) recommended that there is a need for continual effort to study participants in other countries to better understand how different geographical and socio-cultural contexts may influence the use of blogs.

Method

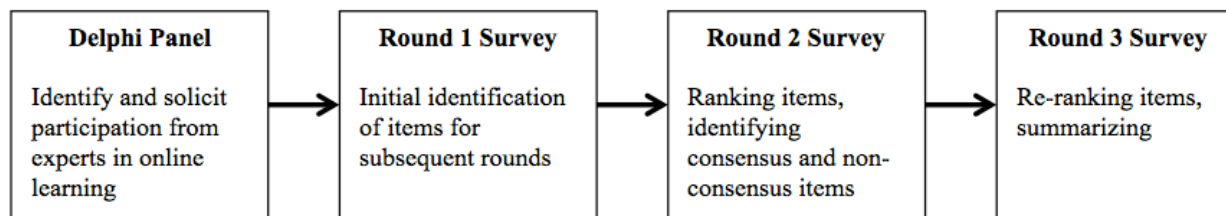
Research Design

This study employed web-based modified Delphi method to capture the judgment of experts in the utilization of weblogs. The Delphi method is an iterative process to collect and distill the anonymous judgments of experts using a series of data collection and analysis techniques interspersed with feedback (Skulmoski, Hartman, & Krahn, 2007). The web-based survey tools used in this study are Google Drive and Gmail. The process suggested by Wilhelm (2001, as cited by So & Bonk, 2010) involves three rounds of information and consensus gathering. This is shown in Figure 1.

Selection of the Panel Members

Experts from selected higher education institutions in the country who have been integrating Information and Communications Technology, specifically blogs, served as the panel members. In their literature review, Baker, Lovell, and Harris (2006) observed that there is a limited consensus as to what an expert is. They added that defining people as experts may not be about who they are but what attributes that they possess. Adler and Ziglio (1996) proposed the following criteria in the selection of experts: knowledge and experience in the issues under investigation, capacity and willingness to participate, sufficient time to participate in the Delphi, and use of effective communication skills. The panel members were identified through the assistance of the Foundation for Information Technology Education (FIT-ED), a private, non-profit organization based in Makati City, Philippines, whose mission was to help people and communities in harnessing the information and communication technologies for learning. The

Figure 1
Delphi Rounds



initially selected panel members made the referrals. Because expert observation was sought, a purposive sample was employed. There were 12 teachers who participated in the first round. According to Skulmolski et al. (2007), where the group is homogeneous, a smaller sample of between 10 and 15 may yield sufficient results. In the second and third rounds, there were only nine and 10 participants, respectively, who committed themselves as panel members. Nworie (2011) stated that attrition can be a major issue in the Delphi method due to the time involvement.

Procedure and Data Analysis

For the first round survey, it purposely identified the various emerging issues in utilizing weblogs among higher education classrooms by teachers. The responses were thematically organized and served as the basis for the subsequent rounds. The survey was sent through Google Drive to maintain anonymity and confidentiality of responses. The questions were constructed through the form application of Google Drive after which these were sent to the participants through their e-mail addresses. When the participants finished answering, they submitted their forms without the researcher's knowledge of the sender since Google Drive organizes the answers in a spreadsheet right after a participant clicks the "submit" button in the form, hence, the anonymity of responses. For background purposes, the survey includes information about the respondents on the following: respective departments in the university; courses where they have integrated blogs; and the number of years that they have been using blogs in their teaching. Particularly, the panel members were tasked to answer the following questions: (a) "What challenges/issue have you observed in the course of the utilization of blogs?" and (b) "How did these issues affect the performance of the students?" This was the major framework of the study. They were also asked to state the purpose of blog use, to identify the factors contributing to the emergence of the issues,

and to cite ways of addressing the issues. The responses were used in the discussion of results.

The panel members were initially given four weeks to complete and to return their responses, but the time frame was extended for two weeks to enable all 12 panel members to accomplish the form. The first problem generated 22 statements while the second problem had 12 responses. The statements gathered from the first and second problems were qualitatively "analyzed by grouping similar items together" (Hasson, Keeney, & McKenna, 2000, p. 1012). The recurrent words used in the responses helped the researcher in grouping these responses. After a thorough scrutiny of the combined statements, initial themes were generated from these organized responses with careful consideration of the words used by the panel members in their replies. The statements that did not belong to any of the other groupings were still included in the list. A summary table of the initial themes and independent statements generated was prepared. These findings were reported back to the panelists for their review in the second questionnaire (Franklin & Hart, 2007).

In the second round, the summary of the statements generated in Round 1 was e-mailed to the 12 participants to give them the opportunity to verify their responses and to change or expand their Round 1 responses (Skulmolski et al., 2007). The panel members were given four weeks to evaluate the result of Round 1, but the time was extended again for 2 weeks to give them more time to accomplish the task. They were asked to carefully evaluate the items under each area of themes provided; afterwards, they ranked the areas, with 1 (*most pressing issue*), to 5 (*least pressing issue*). According to Powell (2003), the second and subsequent rounds are more specific, with the questionnaires seeking quantification of earlier findings, usually through the rating or ranking techniques. The panel members were invited to add to the list of statements if they perceived the need and to include the item in the ranking. The given rankings were added to get the total for each item. The item that has the lowest total was ranked as the first, and the highest total was ranked last. Comments were also encouraged from the participants.

However, the second round had only 10 participants who returned their responses, resulting in a decrease of the number of responses for the second and third rounds. Kalaian and Kasim (2012) stated that experts who do not return some of the mail questionnaires are excluded from the panel of experts for further data collection. The researcher tried to reach out to all the original participants to remind them of their responses; however, three of them were not able to submit.

The responses from Round 2 were used to finalize the Round 3 questionnaire. The 10 panel members from the second round were asked to evaluate again the rankings, to propose some changes in the ranking if there was a need, and to include their justifications for any changes or disagreement to rankings made. Out of the 10 panel members, only nine returned their responses to the survey. Further analysis and discussion of the data gathered were done only after all the panel members had expressed their agreement to the final list of themes that was organized.

Results and Discussion

The demographic information asked from the 12 participants during the first round of the survey shows that most of them are connected with the Teacher Education department in their respective universities as indicated by the seven participants from Education; one of the participants did not indicate his/her department. When asked about the courses where they integrated blogging, the participants identified the professional education courses such as Educational Technology, Assessment, Research, Field Study, and Practice Teaching. Incidentally, Practice Teaching emerged as the most recurrent in the responses, showing 13 out of the 19 courses that were enumerated by the respondents. The other courses identified were from general education such as Natural Science, Math, Analytic Geometry, and Philosophy and Religion in Asia. With regard to the number of years that they have been integrating blogs in the courses, the information data show that six of the 12 participants have been using it for 1-2 years, five participants for 3-4 years, and one participant for 5-6 years. The final consensus of the participants from the three-round survey on the problems pertaining to the issues encountered in the utilization of blogs and the effects of these issues on the performance of the students was given interpretation.

Issues in the Utilization of Blogs

In terms of the utilization of blogs in the classroom, six key areas emerged in the following order of importance: (a) limited time and access to computer and Internet; (b) tedious preparation, maintenance, and management of blogs; (c) technological difficulties of

students; (d) low level of interaction among students; (e) digression in comments posted; and, (f) newness to online teaching.

Limited time and access to computer and Internet. With the heavy subject load taken by tertiary students in a semester, it is not surprising to have this as an issue. Students have to negotiate their schedules and the completion of requirements in their subjects. One of the teachers shared, “My students have difficulty blogging because of their schedules. We have limited time in our laboratory, so they need to go out in internet café to be online.”

Blogging activities are not the only requirements that students need to accomplish in a semester. One teacher stated that students need “additional time for the blog.” Before posting comments on a blog post, the students are required to have a careful reflection and organization of their ideas. As such, they need ample time to compose their comments that will satisfy the expectations of their teachers and classmates who will be reading their comments. The studies of Yu-Chih (2010) and Shoffner (2009) indicated the problems on lack of access and lack of time as factors in the reduction of pre-service teachers’ blog entries. Primary to the accomplishment of blogging requirements is enough time. Wang and Hsua (2008) posited that blogging is time-consuming because it requires a great amount of reading, writing, responding, and thinking outside the required participation time in class and that it adds extra homework. Hence, it is very helpful for teachers to do a survey of the load and schedules of students during a semester to make accommodations for students.

Another teacher added, “To top [all the issues], the students have no access to a computer at home.” This predicament of students all the more limits their time to accomplish their blogging activities. Comments on blogs are posted only when there is a computer and Internet access; consequently, without these technologies, students fail to participate in the blogging activities. This implies that teachers have to conduct a survey of the students’ technological provisions before blogging activities are made part of their instruction. Alternatives can be planned so that all students including those without computers and Internet access may realize the objectives of blogging. To alleviate this issue, Yueh-Min, Yu-Lin, and Tien-chi (2009) suggested mobile blogging, which their study found to provide not only blogging application for students but also the convenience with no limitation in time and position. This can be very plausible since most of the students nowadays use mobile phones with an Internet connection.

While there are provisions for computers and Internet in schools, these may not really accommodate all the students’ needs. More often than not, students

only get to use these facilities when they are enrolled in computer subjects. One respondent said, “Students who have no access to Internet will just answer during the time schedule for the subject.” The teacher attributed the limited access to computer and the Internet to the students’ financial difficulties. Most computer-based tasks extend beyond the class time, so students are compelled to go to computer shops outside the campus. This means additional financial burden on the students. Harris and Rhea (2009) identified that the availability of computing resources as a requirement is one of the disadvantages of using Web 2.0 technologies in the classroom. They clarified that this is a major disadvantage for students who cannot afford or do not have computer access.

Tedious preparation, maintenance, and management of blogs. The integration of blogs in the courses taught by teachers requires careful planning since this is an innovation in the repertoire of teaching strategies. Pollacia and McCallister (2009) stated that online instructors have embraced the use of blogs because of the simplicity of creating and maintaining the blog. However, teachers still find difficulty since they handle several subjects with large class sizes in a semester. This poses a challenge in the preparation of the different lessons. Mulryan-Kyne (2010) affirmed this when she claimed that there is sufficient evidence available to suggest that as class sizes increase at tertiary level, teachers often face new issues and problems. One of the respondents shared, “It is difficult to maintain since preparation and maintenance of the blog is time-consuming especially so that I handle at least seven classes. Thus, topics are not always updated so we resort to the traditional.” Studies conducted on the use of blogs in teaching are consistent with the issue in the current study (Makri & Kynigos, 2007; Mullen & Wedwick, 2008). Teachers must find what works best for their students and their classroom blogging (Mullen & Wedwick, 2008).

Besides the teaching loads, teachers have other school-related responsibilities. Consequently, it becomes an additional burden for them to prepare and maintain their blog. Kenney and Newcombe (2011) found that the re-designing and administration of a blended approach in courses taught was a major challenge since teachers did not receive any workload reduction. They also added that the online portion of the course required more time than originally anticipated for grading and providing feedback. The heavy workload of teachers usually does not allow them to maintain the timely provision of feedback to the comments of students on the teachers’ blog post. To sustain interaction with students in blogs, teachers must maintain the thread by responding to the comments of the students. Archambault, Wetzel, Foulger, and Williams (2010) expressed that the benefit of social

networking tools is allowing greater access and communication so that students can receive more immediate and ongoing feedback through their use.

The respondents of this study recognize the benefits of Weblogs as an innovative approach, so they try to integrate this technology in their classes, albeit this requires time for teachers to fulfill this task. Mulryan-Kyne (2010) declared that time for designing, implementing, and testing new active teaching approaches can put additional pressure on faculty members who are also trying to meet other institutional demands.

For teachers who have students with no computer training, they need more preparation because they need to adjust their lessons to accommodate these students. One of the respondents stated, “Considering that the students have no prior knowledge and skills for basic computer literacy, it is an additional burden for me to go back to basic.” Students cannot participate in blogging activities if they are not taught how to manipulate the technology in the first place, which reduces the time of the main content of the course being taught. Another teacher said,

On my part as a facilitator of the blog activities, I am very much challenged by my students’ lack of initiative to learn the “hows” of doing activities posted especially in the research class. Instead of giving time to help them do their research activities, time is sometimes spent in addressing their lack of skills in using the computers.

The foregoing discussion does not only relate to the issue of tedious preparation on the part of the teachers but it is also a clear indication of technological difficulties by students.

Students’ technological difficulties. Although most of the students are computer literate, this does not necessarily lead to online technological literacy. Generally, students finish a three-unit course in computer education as part of their general education subjects but they only get an orientation on the basic computer applications. Bennet, Maton, and Kervin (2008) asserted that questions must be asked about the relevance on education of the everyday ICT skills possessed by technically adept young people. In this study, the respondents observed that students have difficulty in using online tools. These are two teacher observations about the difficulties of students: “Students were not so comfortable yet in using blogs”; and,

For my educational research class, a lot of my students who are not competent in using the internet or the computers do not participate and will have the tendency of submitting their answers in hard copy instead of posting it through the blog

site. They will even have the tendency to ask if it is possible for them to see me personally in the office because of the difficulty of opening the blog site or of anything that has something to do with the technicalities of opening the site.

These difficulties indicate that students will engage themselves better in blogging if they are equipped with the technological skills. Hung (2011) identified in his study of the pedagogical applications of blogs that technical capability constituted one advantage in using blogs. A deficit on the entry level skills required for the use of enhanced technologies can be a barrier to effective learning (Banyard, Underwood, & Twiner, 2006).

These observations imply that students need further instructions or technological assistance from the teacher to enable them to participate in their blogging activities. It will require more time from the teacher but the students will be more confident in the succeeding assignments required. An orientation and demonstration sessions on the use and purpose of weblogs to support consistent and appropriate use are recommended (Sharma & Xie, 2008; Wang & Hsua, 2008). It is therefore important that some basic skills will be taught and developed for online learning (Huang et al., 2011). Sim and Hew (2010) suggested that educators should implement measures to help students overcome their lack of understanding or unfamiliarity with the technology. They recommended the provision of demonstrations and hands-on practice as well as guidelines and reference notes on how to blog to increase the students' confidence in using the technology.

Students use computers and the Internet for various reasons. Apart from the academic reason, they mostly use these technologies for entertainment. Studies show that majority of students use Web 2.0 applications such as blogs for social or leisure purposes (Levy & Hadar, 2010; Leslie & Murphy, 2008). Integrating blogging in the academic courses may pose some challenges to the students since this is not their usual environment. Teachers need to refocus the students' consciousness on the purpose of the blogging activity by including this in the training sessions (Wang & Hsua, 2008).

Low level of interaction among students. Blogging entails interaction among students and teachers. It is an opportunity for students to construct and share their ideas and learn from their peers or teachers. Powell and Kalina (2009) claimed that Vygotsky's social constructivism is based on social interactions along with a personal critical thinking process. Blogs allow this kind of interaction even outside the classroom. Rhode (2009) conjectured that interaction is a key component to the development of the distinctive social context to online experience. In his study, he found that not all forms of interaction that

may be equally valued by learners are effective. This current study reflected this as low level of interaction and emerged as one of the issues. However, this finding is contrary to the study of Huang et al. (2011) that found blogging to be encouraging participation from students who are not used to speaking up and criticizing in public. Other research established that blogging increased students' motivation to learn from peers (Yang & Chang, 2012; Sujud & Abd Rahim, 2013). The blogosphere is a public area where anyone can have access to articles posted on blogs, and this nature of the blogosphere can inhibit students from being more candid in interacting with their classmates online. Studies have identified the issue of privacy to be contributing to the negative attitude of students toward blogging (Andergassen, 2009; Harris & Rhea, 2009; Sharma & Xie, 2008; Yu-Chih, 2010). In this current study, teachers observed that students are "uncomfortable in expressing themselves online" and "fearful of being ridiculed online." Students are aware that their blog posts or comments are open to other people besides their classmates, widening the sphere of online exposure. This feedback from the students necessitates the identification of strategies that will help students in altering their negative attitude toward blogging activities. Williams and Chinn (2009) articulated that increasing opportunities for students to become active learners has the potential to create more dynamic classroom environments that bring excitement and energy to the process.

While the purpose of blogging is promoting interaction and sharing of ideas, students may be intimidated by classmates who have better language skills. This issue was also observed by Huang et al. (2011) when they stated that the students' concerns include lack of questioning and commenting skills. The work of Leslie and Murphy (2008) pointed out that the students' lack of linguistic ability is one of the reasons students limit their responses to comments made by their classmates. This may cause other students' lowered enthusiasm. As two teacher respondents commented, "Students are still not used to learning collectively and discussing through blogs and other interactive media" and "Some students are not gifted with literary skills." These statements imply that it is important then for teachers to initially ensure that students are prepared to engage themselves in learning activities involving blogs to facilitate more interaction among students. Williams and Chinn (2009) found that the initial experience level of the students was one of the challenges that arose in the experiential learning activities using Web 2.0 tools.

Another teacher attributes the low level of interaction among students to the students' attitude toward blogging activities. Two of the participants stated, "Students lack the initiative to learn things on

their own; they are used to spoon-feeding” and “The challenge with them is their initiative to give comments or feedback to issues raised by their classmates or by me as their instructor.” These observations seem to contradict what other researchers have found (i.e., that students have a favorable or positive attitude towards the integration of blogs into learning; Avci & Askar, 2012; Halic, Lee, Paulus, & Spence, 2010). In a study conducted by Kenney and Newcombe (2011), they identified the issues of students’ skepticism and their inexperience with taking responsibility for their own learning. The lack of initiative can be brought about by the issues on access and time, which were discussed under the first issue identified in this study.

Digression in comments posted. Responding to blogs brings about diversity in opinions. It is similar when teachers ask questions in the classroom for which students give divergent answers or even digressive responses. But unlike in the classroom where responses can be directed back to the topic, students are left on their own to write their opinions or responses in blogs. One teacher mentioned, “Some of the comments they gave are not helpful.” This can pose a problem since teachers may not be able to respond right away to these blogs. Leslie and Murphy’s (2008) study showed that the “lack of teaching presence” (para. 38) affected the way that the students engage themselves in blogging. Blog posts are open to different text interpretations because the comprehension of text is left solely to the students at the time of blogging. Students need to be oriented on the manner or structure of response to the blog posted by the teacher. This can guide students to respond appropriately to blog posts. Scaffolds such as provision of a checklist on how to write on a blog can be helpful especially if this activity is initially introduced to students as part of their learning activities.

Clear and specific prompts are helpful for students to be directed properly to the issue at hand. Teachers are the primary support of the students as these students venture into online activities of which they are not yet proficient as revealed in the previous issues presented. Clear instructions with examples should be given before the blogging assignments commence. Hungerford-Kresser, Wiggins, Amaro-Jiménez, and Amaro-Jiménez (2011) particularly highlighted the need for more instructor guidance and for prompts to make blogs less laborious.

Not used to online teaching. This particular item was added in the list by the teacher respondents in Round 3. They stated that students have a hard time accomplishing online requirements due to lack of experience in blogging activities and unfamiliarity with the technology. One teacher respondent said, “Some, although familiar with blogging and are computer-literate, are not familiar with online teaching.” Sim and

Hew (2010) suggested making blogging a compulsory requirement to ensure that students become familiar with the technology for a start because unless they try it, they may not embark on using blogs at all. While the format of blogs is relatively user-friendly (Hanson et al., 2008), this blogging technology is still relatively new in third world countries such as the Philippines. According to Sim and Hew (2010), blogging is an emerging trend. Hence, students need some scaffolding in posting their blogs. Powell and Kalina (2009) stated that a support system will help a student in accomplishing a difficult task. Fluckiger, Vigil, Pasco, and Danielson (2010) suggested the use of criteria-specific templates developed for each blogging assignment that serve as both anchors and guides for the assigned descriptive narrative. Providing scaffolds will help students to focus on what they need to do when blogging. Bennett, Matton, and Kervin (2008) argued that while technology is embedded in young people’s lives, their use and skills are not uniform. It implies then that the kind of scaffold given to students may vary depending on their individual needs.

Effect of Issues on Performance of Students

In terms of the effect of the issues on the performance of students, five key areas emerged in the following order of importance: (a) few benefited from the blog activities, (b) non-compliance with requirements on time, (c) quality of work not complying with set standards/ criteria, (d) not certain about the effects of issues on student performance, and (e) no effect on performance.

Few benefited from the blog activities. Most of the teacher respondents indicated that they use blogs to let students share their ideas about an issue/question. However, there are students who are not able to participate in or maximize the benefits of blogging due to the problem of access to computer and Internet. As one teacher respondent shared, “Because of the limited internet access, very few will be able to accomplish the blogging exercises. However, in the Graduate School, the students can accomplish the task considering that most of them can afford to have a laptop.” The lack of access to computer and Internet greatly undermines the performance of students in blogging activities. Moreover, the technological difficulties of some students as discussed earlier hamper their maximized participation in blogging activities. Wang and Hsua (2008) discerned that the unfamiliarity of students with the blogging procedure affected their willingness to read or post articles. According to a teacher respondent, “Some of the students did not benefit from the activities done through blogs because only those who fully participated essentially benefitted.” Another teacher respondent shared,

The above-stated issues in some way limited the participation of students. Blogs are meant to welcome participation among students who cannot share their insights in class due to classroom limitations but because of the issues raised, some students were also restricted to share.

This low level of interaction has limited the benefits of students from blogging activities.

Non-compliance with requirements on time. The teachers mentioned that they use blogs to upload and showcase the outputs of students. This study revealed that this is not fully realized because the primary requirements are not met due to the issues on computer and Internet access and on technological difficulties. These issues are undoubtedly great barriers to the students. As a result, students are deprived of points for the graded requirements. One teacher stated, "Despite the leeway I am giving my students to give their answers on blog activities, there are students who still cannot meet deadlines because of internet access problem. . . . Not complying on time will mean significant deduction in their evaluation." This particular teacher obviously gave a corresponding grade to the blogging activities of students. Students who did not have access may have failed to meet the objectives of the activity. From the statement, it can be deduced that she helped the students to meet the requirements by giving them more time to accomplish their tasks. But the technical assistance needed is the more pressing need, that is, teachers need to find ways to ease Internet access problems.

Nonetheless, for a teacher who does put a grade equivalent to blogging activities, she still observed that students do not comply with the requirements. She shared, "Though blogging is not a measure of student performance, most of my students lag in complying with this requirement on time." This can mean that grades for blogging activities are not the only motivating factor for students' participation. Levy and Hadar (2010) suggest that students can be motivated by designing creative assignments that require collaborative work within the virtual environment and rewarding students for their active participation.

Quality of work not complying with set standards/criteria. With the students' trepidations in blogging activities, they are inhibited to participate more fully as expected. Blogging entails construction of ideas about a topic started by a teacher. In addition, students need to read and react to the ideas of their classmates. If students are anxious about what they write in blogs, they may not be able to bring out their best. This can also be brought about by their inexperience in blogging as part of their academic course. Kenney and Newcombe (2011) cited the difficulty of students with the online format in their course as one of the challenges in using a blended approach to teaching.

When students have a limited time to do work online, it is tantamount to poor quality of blogging. Since blogging means an additional time for students to spare within their heavy academic load every semester, most of them accomplish tasks for compliance. One of the respondents said that she gives a rubric to evaluate the students' output, but she is not able to sustain the making of rubrics for every blog activity since it is time-consuming. This supports the issue of teachers on the tedious preparation and maintenance of blogs, which also affects the kind of output students submit online. The heavy responsibilities of teachers can be a factor for them to not fully monitor the blog requirements of students. Hanson et al. (2008) stressed educators' competence in using Web 2.0 applications and ability to evaluate website usage as requirements in taking advantage of these applications.

Not certain about the effects of issues on student performance. From the informal interview with one of the respondents, the teacher attributed the uncertainty of the effects of the aforementioned issues to unclear instructional goals or purposes of the blogging activity. She said that since blogging is new, she wanted to try exploring the novelty of this activity. This means then that the teacher is using the blog for innovation purposes. Two teachers commented on this item saying, "Blogs are only one of the means for getting a grade" and "I don't grade blogs. I use blogs more as an assessment of instruction delivery, and not of student performance." These statements imply that the effects of the issues on performance are not clearly identifiable since the teachers did not have a specific purpose regarding assessing student performance. Rhode (2009) posited that the primary focus for many instructional designers and instructors continues to center around improving student outcomes within the online learning experience. The study of Hemmi et al. (2009) also showed that students perceived blogging as valuable when the purpose of using the blog is more directed at pragmatic concerns such as acquisition of learning skills and knowledge.

No effect on performance. This item was ranked the least among the five issues on blogging. This can be attributed to the absence of assessment tools prepared by the teachers to measure the performance of students in their blogging activities. One teacher openly admitted that blogging activities are not really part of the grading of students. She stated, "I don't grade blogs. This is part of their class participation (to include active class participation, attendance and blogging) which gets only 10% of the class requirement."

When assessment is integrated initially in the blogging activity, teachers are able to determine the consequent level of student performance. This suggests that teachers need to be more conscious of finding ways to assess students' blogging

participation even if this does not form a major part of the students' grades. Assessment does not only mean looking at the output of students, but also checking into the other processes or areas that may hinder students' participation such as the issues identified in this study. In the validation study of Dray, Lowenthal, Miskiewicz, Ruiz-Primo, and Marczyński (2011), they were able to develop a self-assessment tool that determines the readiness/preparedness of students for online learning. This instrument measures four areas of ICT engagement: basic technology skills; access to technology including ownership of technology and connectivity to the Internet; usage of technology, such as nature and frequency of use; and relationship with ICT, such as beliefs, values, confidence, and comfort with technology. These areas incorporated in the tool can help teachers to address the challenges of students early on. Another teacher said, "It did not affect the performance of the students really." One possible reason for this is the lack of purpose for utilizing blogs in the teaching-learning process. As stated earlier by one respondent, the use of blogs is basically to try the new technology. There is then a requisite for teachers to also be acquainted well with the pedagogy before integrating it as part of instruction.

One teacher, however, disagreed with this item, and stated, "I don't really think the above issues did not affect their performance." This response implies that the issues presented have an effect on the students' performance. Blog activities remain an open-ended teaching-learning strategy.

Conclusion

The issues in this study observed by the teachers are mostly student-oriented. This suggests that the teachers themselves did not encounter many problems as they integrated the use of blogs in their teaching activities except for the tedious preparation, maintenance, and management of blogs. This calls for administrators to look into the needs of teachers who are integrating blogging or other online experiences to produce better student learning outcomes and also for teachers to assess the needs of students that will enable them to maximize their participation in blogging activities.

This study, however student-oriented, did not include students as respondents since the purpose was to generate the perspectives of the teachers who serve as the main implementers of blogging activities in the classroom. Further study on the empirical effects of blogging in the performance of students can be conducted involving the students as the main respondents.

Further, the results of the study suggest that there is still a dilemma in identifying the effects of the blogging on student performance since there is no standard assessment or evaluation tool for the blogging activities. The evaluative possibilities in blogging activities can be explored in time.

The integration of weblogs in the classroom to cater to student learning needs purposeful and careful planning to deter the occurrence of the issues/challenges that have surfaced in this study. The research of Sim and Hew (2010) revealed that self-report studies suggested that the use of blogs can help student learning. Harnessing the blog as an instructional tool can prove very productive since it caters right into the interests of these learners. With careful planning of the blogging program, the whole academic community—administration, teachers, and most especially students—can definitely benefit richly.

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SHIRLEY AYAO-AO is faculty and the current Undergraduate Research Coordinator of the School of Teacher Education of Saint Louis University, Baguio City, Philippines. She is handling the Educational Technology courses in the professional education department and facilitating online courses in the graduate program in her school. Having been trained in various ICT integration programs, she is one of the national trainers of the public school teachers, specifically on Intel Teach Elements Courses and Web Enhanced Learning Activities. She also serves as a research promoter for undergraduate and graduate students especially in areas related to

Curriculum, Teaching Strategies, and ICT
Integration.

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Transcending Disciplinary Lines to Promote Student Achievement at the Post-Secondary Level

Erinn Bentley and Jennifer Brown
Columbus State University

Writing proficiencies in the K-12 setting and at the post-secondary level have become stagnant and have decreased in some instances. Several studies indicated using peer review was beneficial for students by increasing student engagement and providing appropriate feedback. The purpose of this study was to examine the use of a peer review workshop as a pedagogical tool to promote teacher-candidates' increased proficiency in writing and teacher-candidates' increased skills in using peer review as a formative assessment tool. The mixed methods study used the peer review forms completed by the participants and a follow-up survey as the data sources. The researchers found participants provided specific feedback, but they seemed to have difficulty clearly articulating specific strengths and weaknesses regarding the organization and mechanics of their peers' essays. The implications for using this pedagogical tool are to continue to refine the peer review form and process. In addition, other discipline specific techniques and strategies should be explored regarding their ability to transcend discipline lines and promote teacher-candidates' general pedagogical knowledge.

Over the past two decades, students within the US's K-12 learning environments have not made substantial gains in writing achievement (Applebee, Langer, Mullis, Latham, & Gentile, 1994; Applebee & Langer, 2009). For example, 70% of students in grades four, eight, and 12 were ranked as low-achieving writers according to a recent National Assessment of Educational Progress (NAEP) report (Persky, Danne, & Jin, 2003). Standardized test results have caused scholars to believe that adolescents (defined as students in grades four through 12) are experiencing "a writing proficiency crisis" (Graham & Perin, 2007, p. 11). This writing proficiency crisis not only impacts students in elementary and secondary settings. The ACT (2005) cited that one-third of high school graduates are not prepared for college-level composition courses. Further, some post-secondary institutions have reported increased enrollment in remedial composition courses (e.g., Hoyt & Sorenson, 2001; Ignash, 1997), suggesting that students may need additional support in composing academic and professional genres beyond the K-12 educational setting.

According to scholars (e.g., Coker & Lewis, 2008; Graham & Perin, 2007; National Commission on Writing 2003, 2004, 2005; National Writing Project & Nagin, 2006; Persky et al., 2003), adolescents need ongoing instruction in writing across genres and disciplines to promote their achievement beyond the K-12 classroom, into post-secondary classrooms, and into the workplace. Providing adolescents with quality writing instruction requires the preparation of quality writing teachers across grade levels and content areas.

In recent years, faculty within a teacher education department noticed a decline in the writing proficiencies of education majors early in their coursework. To address these students' writing

deficiencies and to better prepare them as future writing teachers, these faculty designed a writing project spanning four entry-level foundations courses. The purpose of this foundations writing project was three fold: to help students improve their writing skills by focusing on a specific genre within each course, to help students prepare for workplace communication by exposing them to genres within the education profession, and to engage students in pedagogical strategies for teaching writing within their future classrooms. More specifically, faculty adopted one pedagogical practice—peer review workshop—to improve student writing proficiencies and model formative assessment practices among pre-service teachers.

The purpose of this study was to examine the use of a peer review workshop as a pedagogical tool to promote students' increased proficiency in writing and students' increased skills in using peer review as a formative assessment tool. Considering the current crisis in adolescent literacy, it is imperative that all preservice teachers—across grade levels and content areas—learn how to be skilled writers and teachers of writing. This study represents one way in which teacher preparation programs can transcend disciplinary boundaries and provide teacher candidates with the general pedagogical knowledge needed to address their future students' writing needs.

Related Literature: Peer Review as a Pedagogical Tool

Fallows and Chandramohan (2001), and Ozogul, Olina, and Sullivan (2008) expanded the concept of formative assessment in higher education to include the evaluation of "student work that is still under

development” (Ozogul et al., 2008, p. 182). One pedagogical strategy often used as a formative assessment tool is peer review or evaluation. For the purposes of this discussion, peer review refers to “the structuring of a process to allow peers to review each other’s professional processes and/or products with the goal of improving such processes or products” (Woolf & Quinn, 2001, p. 22).

Several studies have indicated using peer review was beneficial for students. For example, Orsmond, Merry, and Reiling (1997) reported students both enjoy the peer review process and attribute this process to their learning. Peer review has also been linked to students’ development of critical thinking skills (Li & Steckelberg, 2004), students’ increased level of engagement with an assignment (Anderson, Howe, Soden, Halliday, & Low, 2001), and students’ overall awareness of the evaluation process (Smith, Cooper, & Lancaster, 2002). Historically, peer review has frequently been used in post-secondary educational settings as a pedagogical tool within first-year composition courses. Two recent studies investigated the use of peer review as a formative evaluation tool among pre-service teachers. Ozogul et al. (2008) compared the use of teacher, peer, and self-evaluation of lesson plans among preservice secondary teachers. This study indicated peer evaluation positively affected student achievement; the authors believed more efficient training of students in the process of formative assessment might further increase their writing proficiency. Next, Ozogul and Sullivan (2009) investigated methods for providing students with appropriate peer evaluation training, resulting in higher student achievement gains. These studies affirmed the review of literature on peer review as an effective instructional strategy; further, these studies indicated that peer review not only improved student learning but also trained preservice teachers in formative assessment practices.

While the studies of Ozogul and Sullivan (2009) and Ozogul et al. (2008) indicated that peer review can be implemented effectively within teacher education coursework, it is important to note the context of this research. In both studies, participants were junior-level undergraduate students who were secondary-level education majors. Students were enrolled in a 300-level computer education course (Ozogul et al., 2008) and in an upper-level technology design course (Ozogul & Sullivan, 2009). In both studies, the writing assignment in which student engaged in peer review was focused on integrating technology into lesson plans. As the students were upper-level undergraduates, it may be assumed they already possessed some background knowledge in general education as well as content knowledge in their respective disciplines. Therefore, their prior knowledge may have affected their

understanding and experience using formative assessment tools, such as the peer review process. Ozogul and Sullivan (2009) noted that the study of peer review as a means for training preservice teachers is in need of further investigation, particularly among students early in their education coursework. They stated,

It would be appropriate to extend the research to other types of tasks to investigate the generality of the present findings and to lower grade levels in an effort to identify an approximate level at which students can begin to use such procedures effectively. (Ozogul & Sullivan, 2009, p. 408)

Transcending Disciplinary Lines, Promoting General Pedagogical Practices

In an effort to address the gap in research identified by Ozogul and Sullivan (2009), two faculty members within a teacher education department investigated the use of peer review among preservice teachers enrolled in an introductory (2000-level) foundations education course. The purpose of this study was three fold. First, peer review was implemented as a pedagogical strategy for teaching a new writing project and improving students’ writing skills. Second, peer review was used as a means for training preservice teachers in formative assessment methods. Finally, implementing peer review (as a component of the new writing project) represented a philosophical change in the Teacher Education Department’s policy regarding educational foundations courses. That is, by adopting a core writing assignment within the foundation courses, the Teacher Education Department recognized the need for all preservice teachers to become skilled writers and trained teachers of writing. Further, the department recognized the need for locating evidence-based strategies in other disciplines and applying them to their practice.

Until the implementation of this core writing project, focus on entry-level preservice teachers’ writing skills (within this department) was primarily delegated to the first-year composition courses. Writing is not a set of discrete skills that can be mastered in a single semester. Rather, many scholars view writing as a complex process of learning that extends over time (Emig, 1971; Flowers & Hayes, 1981; National Writing Project & Nagin, 2006). When it comes to writing proficiency, preservice teachers are doubly burdened. Not only must they become proficient writers themselves in order to succeed in their academic coursework and compose professional genres (e.g., resumes, lesson plans, and teaching philosophies), they must also learn pedagogical strategies for teaching writing within their future K-12 classrooms.

According to research, composition pedagogy is not often explicitly included in preservice teachers' coursework. The National Writing Project (NWP) and Nagin (2006) reported, "With the exception of college-level teaching geared to the freshman writer, composition pedagogy remains a neglected area of study at most of the nation's thirteen hundred schools of education, where future public school teachers are trained" (p. 5-6). In sum, preservice teachers (across grade levels and content areas) need focused instruction on improving their own writing skills as well as pedagogical training for teaching and evaluating writing. This study, then, addressed this gap in literature by adopting the peer review practice within a foundational education class to improve the writing skills of preservice teachers and to introduce to them to one formative assessment tool through a hands-on approach.

Method

Participants

The Department of Teacher Education is part of a 4-year institution in the Southeastern United States that is considered a master's level school. Enrollment at the state university has increased over the past 5 years and reached a maximum of 8,307 in the fall of 2011. The participants included 29 members of an undergraduate diversity course. Of the 29 participants, there were 21 (72.4%) females and 8 (27.6%) males. Regarding racial classification, there were 20 (69.0%) White students, 6 (20.7%) Black students, and 3 (10.3%) Hispanic students. Their ages ranged from 19 to 30. Their majors included early childhood education, fine arts education, foreign language education, middle grades education, physical education, secondary education, and special education. The purpose of this course was to prepare preservice teacher candidates for teaching culturally diverse students in the K-12 setting. This diversity course was a required program component for all education majors and typically completed during the freshman or sophomore year.

Data Collection

Within the department, the faculty and staff who teach the educational foundation courses saw a need to develop the following skills with the students: (a) follow the directions for a given writing prompt, (b) write for a specific audience, (c) synthesize ideas in source-based assignments, and (d) proofread for errors. The ultimate goal was to develop strategies for improving the writing of education majors. With these needed skills and ultimate goal in mind, the faculty decided to locate strategies from other disciplines to

improve the writing of the education majors. Thus, the creation of the foundation writing projects and the implementation of the peer review writing workshop were conceived. Among four educational foundations courses, five writing projects were developed (i.e., literacy narrative, classroom management plan, educational philosophy, classroom newsletter, and interview/reflective essay). In addition to the improvement of writing scores within the educational foundations courses, this work has potential to transcend those departmental barriers that exist in the K-12 setting and at the post-secondary level.

The participants were assigned one of the foundations writing projects, Tracing One's Roots. For this project, the participants interviewed a member of their family. Using the information gained during the interview(s), the participants wrote a reflective essay describing their cultural heritage. After completing the rough draft, the participants self-selected partners to complete the peer review writing workshop either virtually or face-to-face. The completed workshop forms, along with the rough draft, were emailed to the instructor. See Appendix for the peer review form used for the Tracing One's Roots assignment.

The peer review form contained 14 items. These 14 items were divided into three sections: Structure and Mechanics of the Paper, Ideas Expressed, and Impact. The Structure and Mechanics section contained five open-ended questions that asked about the paper's title, introduction, conclusion, and effective communication convention (e.g., punctuation, spelling, and grammar). The section concluded with a 5-point Likert-type scale, with 5 being the highest, for the peer-reviewer to rate the structure and mechanics of the paper. In the Ideas Expressed section, there were four open-ended questions about interviewee, the author's discussion of his or her culture, family structure, and customs, and which areas of the paper needed further development. There were two 5-point Likert-type scales, with 5 being the highest rating for the peer-reviewer to rate the discussions of culture and family. The last section, Impact, contained one item that asked the peer reviewer to indicate the area of the paper that he or she liked the best and the area that was the most distinctive and memorable.

At the end of the course, the participants were given follow-up questions to evaluate the peer review process. The first question asked the participants to rate the overall peer review experience on a scale of 1 (*very dissatisfied*) to 4 (*very satisfied*). The second question involved participant to commenting on the peer review process, including whether they liked or disliked the process. The third question required participants to describe their participation in a peer review process for written assignments in other college courses at this institution and, if so, to indicate the course(s).

Data Analysis

This project used qualitative and quantitative evidence to inform the practice within the educational foundations coursework. By using this exploratory mixed methods research design, the researchers were able to use the follow-up quantitative data and results to build upon the qualitative data and results. Thus, the researchers were able to triangulate the data to interpret the findings. The peer review workshop forms were analyzed for emerging themes. The Likert-type response data and frequency data were analyzed using descriptive statistics.

Results

Peer Review Forms

Of the five questions focused on the essay's structure and mechanics, two questions yielded the most specific feedback from peer reviewers. Question 1 was, "Does the title capture your interest? Does it fit the ideas expressed in the paper? Explain." Of the 24 students, 12 reviewers provided feedback on their peer's title by referring to specific ideas in the essay being reviewed. That is, peer reviewers did not simply state that the title was effective because it was interesting or "catchy." Instead, the reviewers chose key concepts from their peer's essay as evidence of the title's effectiveness. For instance, one reviewer commented that her peer "did a lot of work to trace her mom's roots." Another believed the reviewed title accurately portrayed the writer's "heritage from Africa" and his pride in this heritage. Finally, a third peer reviewer explained: "the title leads me to believe that religious and physical aspects of Devon's culture will be discussed, which they are."

Another way in which students commented specifically on their peer's title was by citing specific terms within the title. Among the 24 peer reviewers, only four provided such feedback on individual terms. For example, one reviewer responded to the effective use of the word "blood" in the title by stating, "I think anything with the word 'blood' will catch anyone's attention, no matter the context. I believe that the title prepares the reader for what the paper is about, and I believe it matches its content well." Similarly, when a student writer did not provide a clear description for the term "roots," the peer reviewer suggested the following:

[The title] "My Family Roots" did catch my interest. However, I feel that the writer focused mostly on her grandmother and mother. Therefore, the "roots" did not go very far, when I think of family roots I think about more than 3 generations. The paper expresses the family values passed down

from a grandmother and mother, I would like to know that from the title.

In these two responses, reviewers used a single word within the title as a springboard for analyzing key concepts or ideas within their peer's essays. Overall, over half the reviewers (18 of 24 students) provided specific feedback regarding the essay's title by quoting words from the title being reviewed or by referring to explicit words or phrases relating to the essay's main ideas.

Similarly, peer reviewers provided specific feedback in response to Question 4, "Does the paper have a conclusion that relates to the title/theme and brings closure? Explain." Here, 11 of the reviewers rated their peer's conclusion as "successful" because it summarized or wrapped up the essay's main point/theme. For example, one stated, "Her conclusion does relate back to her opening paragraph"; another reviewer explained, "He reiterates the information about his ancestors"; and a third reviewer said, "Yes, the paper does recap what was said in the opening argument, as it is supposed to do." The last comment cited was particularly interesting. In this statement, the reviewer not only agreed with her peers—a successful conclusion "recaps" or "reiterates" the essay's main argument. In the second half of the statement, she also remarked, "as it is supposed to do." This phrase indicated the reviewer was cognizant of what a conclusion "does" or how this single component "works" within the context of the essay genre.

Other reviewers evidenced their understanding of what a conclusion "does" by telling their peers how to improve their essays' endings. One student remarked, "The paper lacks a conclusion and does not provide the reader with any closure"; and another stated, "I felt like the paper just ended." Another peer reviewer advised, "Find [a] better concluding sentence to let the reader know it has officially ended." Yet another reviewer suggested, "Writer needs to make sure that the conclusion brings closure to the reader, summing up your points or providing a final perspective on your topic." These responses indicated that peer reviewers were not only able to identify when an essay lacked a successful conclusion; they also explained one or more traits for an effective ending and offered clear, concise advice on how their peer could revise his/her conclusion.

Compared with these two questions regarding the essay's title and conclusion, the remaining three questions on structure and mechanics did not yield many detailed, specific responses from the reviewers. Question 2 was, "Does it have an interesting opening that relates to the title/theme and engages the reader? Explain." Peer reviewers responded in a variety of ways. Five reviewers indicated that their peer's

introduction was successful because it introduced the writer or talked about the writer's background. Two additional reviewers complimented their peer's use of imagery and considered descriptive details as a good way to draw the reader into the essays. The majority of peer reviewers did not provide specific commentary on whether the conclusion was effective. Many simply responded with comments such as, "The opening paragraph is great" and "It helped me dive into this well written paper."

Similarly, even when reviewers recognized that their peer's essay did not contain an effective introduction, they did not provide much constructive feedback. Vague comments included, "I think some things in the first paragraph can be taken out"; "The opening could be better formatted"; and, "The opening needs a little work but over all [is] perfect." Overall, there was no clear consensus among the reviewers as to what makes an introduction "interesting" and "engaging." Neither in the positive nor negative responses, then, did peer reviewers clearly indicate the function of an introductory paragraph in this genre, characteristics of an effective introduction, or advice for improving a weak introduction.

Reviewers also seemed to have difficulty clearly articulating specific strengths and weaknesses regarding the organization and mechanics of their peer's essay. Questions 3 and 5 involved students commenting on their peer's use of transitions and communication conventions (e.g., punctuation, spelling, and grammar). In response to their peers' use of transitions, 14 of the 24 reviewers did not offer specific advice or explanation. Reviewers most frequently summed up their peers' writing by saying the essay "flowed smoothly" or "didn't flow." Only two provided constructive advice on increasing the flow. These reviewers suggested their peers use more transitional words. No explanation was given providing examples of transitional words, how to use such transitional words, and what other writing techniques might promote essay flow. Likewise, reviewers provided very little specific feedback regarding their peers' use of mechanical conventions. Of the 24 reviewers, only seven referred to specific grammatical or mechanical issues within their peer's essay (e.g., run-on sentences, verb use, comma splices, and passive voice).

In addition to the open-ended questions eliciting students' responses to an essay's structure and mechanics, ideas expressed, and impact, there were also three Likert-type response items within the peer review form. When asked to rate the structure and mechanics, the ratings given by the peer reviewers ranged from 3 to 5, $M = 3.94$, $SD = 0.70$. For the discussion of the cultures, $M = 3.85$, $SD = 0.95$, range = 1-5. On the discussion of family, customs, and traditions, $M = 4.08$, $SD = 1.04$, range = 1-5. These results indicate an

uncertainty regarding the meaning of a 1 and the meaning of a 5 on the Likert scale. All three response items had similar means, which could indicate the peer reviewers were using the prompts within the peer review form to guide their ratings.

Follow-Up Survey

The quantitative responses from the follow-up questions were analyzed using descriptive and frequency statistics. The open-ended responses were analyzed for emerging themes. The results showed that the participants were satisfied with the overall peer review process, $M = 3.28$, $SD = 0.74$. The ratings ranged from 2 (*dissatisfied*) to 4 (*very satisfied*). The positive comments about the experience included the points that the participants were able to find and correct mistakes before submitting final essay drafts for evaluation, and that the participants gained a different perspective on their ideas, which offered constructive criticism. In addition, the participants felt the experience was beneficial for gaining additional insight into the cultural backgrounds of a fellow classmate. An unexpected response to the peer review experience was "it can help prepare you for future grading practices." This response was interesting because the foundations instructor did not tell explicitly teach the peer review workshop as a pedagogical tool for use in the K-12 classroom setting. Instead, this student's positive first-hand experience with peer review workshop as a writer informed her beliefs and practices for teaching writing in a future K-12 environment.

According to the questionnaire, there were also a few negative comments on the experience. For instance, some participants believed the writing knowledge and skills of the peer reviewer affected their learning process; other participants preferred face-to-face versus virtual peer review workshops. When asked about other peer review experiences, 60.7% of the participants indicated that they had been involved with peer reviews in other college courses, but an overwhelming majority of the listed courses were English. Two participants listed Spanish courses; none of the other disciplines were listed.

Discussion

Student Writers' Prior Knowledge

The students' responses to the open-ended questions on their peer review forms revealed some interesting findings regarding their prior knowledge of genre components and writing terminology. Given the data collected and analyzed, these student writers know what purposes a title and conclusion serve in an essay. According to their responses, the students believe a

successful title clearly conveys the essay's main point or theme. Additionally, the majority of students believe a conclusion's purpose is to summarize or wrap up the essay's main point or theme. The students' detailed responses to these two questions suggest they feel competent and confident in these writing proficiencies; they are able to clearly articulate why their peer crafted an interesting title/conclusion, and they explain how to improve these essay components to peers who have not mastered them. Conversely, the students' vague responses to their peers' introductory paragraphs, use of transitions, and mechanical conventions suggest these students may possess less competence and confidence in these essay components.

As teachers, it is important to recognize that students' own competence and confidence regarding specific writing proficiencies may profoundly impact the type of feedback they offer as peer reviewers. When asking student writers to provide feedback on their peers' writing proficiencies, we may need to provide models of unsatisfactory, satisfactory, and exemplary writing. Further, simply providing students with writing samples may not sufficiently teach them how to differentiate and evaluate various components of writing within a single assignment. Instead, we may need to explicitly show students how to read and analyze each individual writing component.

In short, we cannot assume all our students share the same understanding of the academic and professional genres we teach within our education courses. Students enrolled in the foundations course examined in this study represented seven sub-fields of education. Each student's content-area background may have impacted his/her prior knowledge regarding academic and professional genres. For example, a secondary-level English major may be familiar with the literary analysis essay genre. A special education major may be familiar with classroom management plan genre. While both of these genres share several similar components (e.g., introduction, thesis, and conclusion), characteristics of a "successful introduction" may vary from genre to genre. Student writers, when moving from course to course and from genre to genre, may not always recognize the differences in these writing components or understand the need for adapting to these different writing situations.

In his essay, "Inventing the University," composition scholar David Bartholomae (2003) noted that students early in their postsecondary coursework often struggle when they are asked to write for a new audience or in an unfamiliar context. He explained:

Every time a student sits down to write for us, he has to invent the university for the occasion—invent the university, that is, or a branch of it, like history or anthropology or economics or English.

The student has to learn to speak our language, to speak as we do, to try on the peculiar ways of knowing, selecting, evaluating, reporting, concluding, and arguing that define the discourse of our community. (Bartholomae, 2003, p. 623)

Students in educational foundations courses, then, must learn the discourse of the education community. When writing a teaching philosophy, a reflection essay, a lesson plan, or another education-related genre, students must determine which language is appropriate for that particular audience and context. Further, student writers must navigate different approaches for composing an introduction, an argument, or a conclusion based on their knowledge of the genre's conventions and the community discourse. Thus, as teachers who work with student writers across content areas, we may need to be more explicit when discussing, modeling, and guiding students in writing the academic and/or professional genres required in our courses.

In addition to recognizing students' differing understandings of genres and genre components, we also need to remember that students' prior knowledge of writing terminology may vary. As is illustrated in these sample peer review evaluations, student writers have the capacity to provide specific, detailed feedback on their peers' work. However, in order to provide such detailed feedback, students must first understand the terminology used to describe writing skills and genre components; next, students must be comfortable using such terminology appropriately. In the open-ended peer review responses, students seemed to struggle most when asked to identify their peer's mechanical errors and provide feedback on their peer's use of transitions. In these responses, very few students used specific terms, such as "comma splices," "pronouns," "antecedents," or "coordinating conjunctions." The fact that most students simply provided vague remarks—"fix punctuation errors" or "it all looks good"—suggests that these students either do not recognize mechanical/transitional errors, or they do not know how to articulate the errors.

Considering that in an undergraduate foundations course—a general requirement for all education majors—only a few students will ultimately become secondary-level English teachers, it may seem unnecessary to recommend faculty devote attention to writing terminology. Such terminology, after all, is typically discipline-specific. For instance, elementary-level physical education majors or secondary-level math majors might wonder how learning writing terms will be helpful to their pedagogical knowledge and development. All preservice teachers, across content-areas and grade-levels, need training and support in the teaching of writing. As the Common Core State

Standards are being implemented nationwide, all K-12 teachers are impacted. More specifically, teachers are now required to teach and assess their students' literacy achievement in all content areas. The Common Core State Standard Initiative (2010) explained:

The Standards set requirements not only for English language arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Just as students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. (p. 3)

With college and career readiness as the goal for all K-12 students, The Common Core State Standard Initiative (2010) called all teachers to share the responsibility of students' literacy development. Thus, regardless if a preservice teacher intends to teach science, English, or special education, he/she will need training and practice in literacy education. While it is not recommended for faculty members teaching education courses to spend an extensive amount of time on discipline-specific terminology and concepts, transcending or blending disciplinary lines may help preservice teachers learn valuable general pedagogical knowledge, such as strategies for teaching writing within their grade-levels and content-areas, that can generalize to their future classroom practices.

Transcending Disciplinary Lines Can Lead to Valuable Pedagogical Knowledge

As mentioned earlier, one student in this study commented that the peer review workshop "can help prepare you for future grading practices." This student, then, found the hands-on experience responding to her peer's writing as an effective way to model and practice methods for evaluating writing in her future K-12 classroom. This student's experience represents a key finding of this study: the peer review workshop can transcend disciplinary lines by incorporating a technique mainly reserved for English Composition classrooms into an educational foundations course to promote students' general pedagogical knowledge. By participating in the peer review workshop, students gained first-hand experience as to how this formative assessment tool may be used to guide and develop students' writing proficiencies. In this study, the instructor did not spend class time discussing how students might adopt the peer review workshop to future K-12 classroom settings, nor did the instructor require students to develop a strategy for using peer review within a discipline-specific writing assignment

(e.g., a lab report for a secondary-level biology class, or a poem for an elementary-level language arts lesson). Future research could include pairing the peer review workshop experience with a pedagogical assignment in which students devise a strategy for incorporating peer review into a lesson for use in a specific K-12 learning context.

Another key finding from this study was the improvement of students' basic mechanics within the peer-reviewed writing assignment. Students' final drafts included substantially fewer mechanical errors than in their earlier drafts. Based on the data collected, it is not evident if the reduction of errors was directly linked to the feedback students received during the peer review workshop. Another possible explanation for students' improvements in mechanical errors may simply be attributed to the prolonged writing process students underwent. That is, in this assignment, students were required to compose a rough draft, submit that rough draft to their peer, and receive the draft back (with peer feedback) before turning the paper in for a final evaluation (completed by the course instructor). This prolonged writing process did not permit students to compose at the last minute and submit a hastily-completed final draft for a final evaluation. By including the peer review step in this assignment's writing process, students were forced to slow their writing and revising pace.

The peer review workshop itself, according to the post-workshop questionnaires, was viewed positively by the majority of students. That being said, results from this study indicate further refinements in the peer review workshop are needed. One possible refinement would be to offer examples to illustrate poor and exemplary work as defined by the instructor. Also, the peer review form could include clearly defined meanings for each level of the five point Likert-type response scale. With the current peer review form, students were simply asked to provide overall ratings for three components of the paper. By providing descriptions of the ratings and examples of what constitutes a rating of 5 versus a 1, students might provide better feedback regarding the reviewed paper's strengths and weaknesses. For example, instructors might revise the peer review form to include rubric components for each section being reviewed. By seeing the rubric components, students might be reminded of the grading criteria for each essay component and align ratings of their peers' work to the final grading criteria. Another positive result of the peer review workshop was the peer interaction and collaboration, which is valuable in the diverse K-12 classroom. Interacting with other students tends to increase thinking and depth of understanding. Involvement in peer collaboration can increase productivity, develop relationship among the students, and improve self-esteem (Chickering &

Gamson, 1987). There is a large amount of empirical evidence that has shown the relationship between cooperation among students and increased student satisfaction, student achievement, and student persistence (Grayson, 1999; Hughes & Pace, 2003; Weidman, 1989; Whitt, Edison, Pascarella, Nora, & Terenzini, 1999).

Challenges and Suggestions for Incorporating Peer Review Workshops

As indicated in the results from this study, adopting pedagogical strategies from one discipline can positively impact the learning of students enrolled in general education coursework. More specifically, utilizing a peer review workshop to support students through the drafting and revising stages of a major writing project led to higher quality final drafts, positive peer collaboration, and exposure to a formative assessment tool education majors might use within their future K-12 classrooms. Despite these positive outcomes, the researchers acknowledge that the adoption of a peer review workshop within a non-English course does present some challenges.

When the researchers met with other members of their Teacher Education Department to discuss methods for incorporating peer review into their courses, the first challenge faculty raised was time. With a great deal of content to teach in a 15-week semester, faculty members worried that using class time to conduct a peer review workshop would not be feasible. In order to guide students in such a workshop, an instructor will need to relinquish some instructional time (e.g., lecture, group activity, or class discussion); however, to complete the peer review worksheet described in this study required only 30 minutes of class time. During the workshop, the instructor assisted individual students with questions regarding their peer's paper or their own draft. Upon completing the workshop, each student possessed immediate feedback to guide him/her in making revisions.

An alternative way to provide students with feedback throughout the drafting process is for the instructor to read each draft and write individualized comments; however, responding to 24 to 30 students' drafts may take a substantial amount of time for the instructor, and students do not receive the feedback immediately. This individualized approach to feedback also does not allow students to engage in collaborative discussions of their writing, thinking, and learning. Finally, prolonging feedback may interrupt the students' momentum in the writing process or motivation to continue revising the draft. Thus, though an instructor may be hesitant to give up class time to conduct a peer review workshop, that brief workshop

may actually take less time and lead to better results than providing students with individual feedback.

Another challenge faculty members rose regarding the implementation of a peer review workshop pertains to writing-specific knowledge (or lack thereof) among students. In other words, if students are not writing experts, can they provide quality feedback on their peers' papers? Though stronger writers generally do make stronger reviewers, it is important for instructors to view peer review not as a grammar workshop. That is, the reviewers are not meant to line-edit their peers' mechanical and structural errors. Instead, the workshop should serve as a formative assessment, where reviewers provide feedback on a writer's ideas and how clearly the writer conveys ideas. Even if students are not future English majors and do not understand specific writing terminology (e.g., dangling modifier, antecedent, or comma splice), students can successfully participate in a peer review workshop by describing the writer's main idea, the clarity of the writer's logic, and when the writer's ideas are confusing. For example, in the peer review worksheet used in this study, the Ideas Expressed and Impact sections do not require students to use writing-specific terminology. Instead, students simply comment on the paper's meaning and ideas. Therefore, when peer review workshops are focused on writers' ideas rather than writers' mechanics, students—with varying writing abilities and knowledge—can participate and provide quality feedback.

The peer review workshop is not a perfect tool; results from this study indicate that adopting a pedagogical strategy from one discipline can positively impact student learning in other disciplines. Future research may include tracking students' long-term writing proficiencies and growth to determine which pedagogical strategies best support student learning. This study could also serve as a model for other instructors to look for resources within their departments and colleges for use within their classrooms, thus promoting professional collaboration across disciplines. Finally, future research may include exploring other discipline-specific techniques and strategies regarding their ability to transcend discipline lines and promote student achievement.

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ERINN BENTLEY is Assistant Professor of English Education at Columbus State University. Her research interests focus on instructional strategies to improve

student writing and utilizing technological tools, such as wikis and blogs, within classroom.

JENNIFER L. BROWN is Assistant Professor of Educational Foundations at Columbus State University. Her primary research interests include undergraduate retention and effective instructional strategies.

Appendix
Developing “Tracing One’s Roots”: Peer Review Form

Author’s Name: _____

Reviewer’s Name: _____

Directions:

1. Review these questions before reading the draft.
2. Read the entire draft before responding to any questions.
3. Respond to each question in writing with the purpose of assisting the author clarify the ideas presented in the Tracing One’s Roots Paper.
4. Rate the different criteria based on expectations listed in the evaluation rubric.
5. Return your completed form to the author and discuss the draft and your feedback.

STRUCTURE AND MECHANICS OF THE PAPER

1. Does the title capture your interest? Does it fit the ideas expressed in the paper? Explain.

2. Does it have an interesting opening that relates to the title/theme and engages the reader? Explain.

3. Does each paragraph build on the one before and transition to the next? Explain.

4. Does the paper have a conclusion that relates to the title/theme and brings closure? Explain.

5. Does the author use effective communication conventions (e.g., punctuation, spelling, grammar)? Please identify areas of strength and possibilities for improvement.

6. Rate the structure and mechanics of the paper on a scale of 1 to 5, with 5 being the highest.

1 2 3 4 5

IDEAS EXPRESSED

7. Who was interviewed for this paper? How do you know who was interviewed?
8. What meaning do you make of the author's discussion of the many "cultures" to which he or she belongs and the significance in which they play in his or her daily life? Is it consistent with the other ideas expressed?
9. Rate the discussion of cultures and their significance on a scale of 1 to 5, with 5 being the highest.
- 1 2 3 4 5
10. What meaning do you make of the author's discussion of his or her family structure, customs, and/or traditions and how they impact his or her values, beliefs, and behaviors? Is it consistent with the other ideas expressed?
11. Rate the discussion of family and its impact on a scale of 1 to 5, with 5 being the highest.
- 1 2 3 4 5
12. Are there ideas within the paper that need further development? Do you have any suggestions that might help the author better communicate his/her ideas?

IMPACT

13. What did you like best about the paper?
14. What makes this paper distinctive and memorable?

Online Peer Discourse in a Writing Classroom

Jessie Choi

Hong Kong Institute of Education

This paper is an attempt to explore the interaction discourse of second language undergraduate learners in the online peer review process of a writing classroom in Hong Kong. Specifically, the writer sought to investigate the types of online discourse learners have in the peer discussions on their writing, and to examine the role of explicit instructions and training for producing quality online peer discourses. Finally, she hoped to understand how instructors could better support and facilitate effective online discourse in peer reviews. Ongoing developments in Hong Kong's higher education call for implementation of more innovative technology-assisted teaching methods that emphasize learner autonomy; thus, this study examines online discourse that occurred during the peer review process in a writing class in which learners assisted one another in revising their writing with the help of technology. The study was conducted on a group of first-year part-time undergraduate students in an Early Childhood Education program in Hong Kong. In this paper, the online peer discourse was assessed by examining the types of comments students made for their peers during two writing tasks: a group task and an individual task. To facilitate the analyses of peer responses, a coding scheme was used (Liang, 2008). Results show that students tended to give more positive revision-related comments and that explicit instruction and training had an impact on the quality and quantity of online discourse. In conclusion, the author identifies several essential elements for facilitating online peer response groups.

In response to the call for the use of information technology in education and the emphasis on a learner-centered paradigm, there has been an increasing use of technology in higher education. This mode of teaching has become "an imperative" in many areas of education (Warschauer, 2002, p. 455). In the context of language education, numerous studies have discovered the benefits of the use of technology on teaching writing (Ciekanski & Chanier, 2008; Ho & Savignon, 2007; Shang, 2007; Warschauer & Ware, 2006). Among the numerous benefits, the major one is that it can facilitate interaction among learners. Research has been designed to explore the effective uses of online peer reviews (Hansen & Liu, 2005). However, relatively little research has been done on the nature of interaction in online peer reviews in the context of English as a second language (ESL). Since the process approach is adopted for teaching writing and the Blackboard learning platform is available in the institute of this study, this paper investigates the types of discourse that occur in the online peer reviews of a writing classroom and examines if explicit guidance and training is helpful for learners to produce quality peer discourses that can lead to ESL writing revision. Finally, elements for facilitating online peer response groups will then be identified.

Literature Review

Collaborative Learning

Collaborative learning has been a common practice in the language context in the past two decades. In fact, pair and group activities are the norm in the language classrooms around the world. The effectiveness of collaborative learning has been widely researched and

supported (Johnson & Johnson, 2009; Roseth, Johnson, & Johnson, 2008).

Following Vygotsky (1978), advocates of social constructivism, such as Bigge and Shermis (2004) and Woolfolk (2004), emphasized the creation of an environment that could stimulate learner's inquisitiveness and social interaction, which they believed could result in effective learning. Based on the theory, the role of the teacher is as a facilitator who can provide guidance for learners throughout the process, and learners can develop themselves to full potentials in such a dynamic and interactive environment. Research has found that this situation occurs in the pair and group activities of second language (L2) learning context (Barcelos, 2006; Fushino, 2006; Jacobs, Power, & Loh, 2002; & Woods, 2006).

Pedagogically, research has found that there are various kinds of advantages of using collaborative learning in classrooms. As pointed out by McDonough (2004), the provision of collaborative tasks, such as pair and group activities, in class could allow learners to have opportunities to learn through interactions with others and engagement in the real process of communication of meaning. This view is echoed by Mohammed (2011) who stated that the language teacher always found it hard to let learners experience the "level of free communication" (p. 17), collaborative learning could then help to achieve this by facilitating "student-student interaction" (p. 18) and thus it was effective for promoting language learning for learners.

Collaborative Writing

Research into collaborative writing has proven that collaboration can contribute to a higher quality of

writing (Storch, 2005; Storch & Wigglesworth, 2007) and better acquisition of L2 knowledge (Kuiken & Vedder, 2002). The potential benefits of collaboration in writing lie in the interaction with their peers in their writing process as learners can learn and acquire knowledge when they are involved in a problem-solving activity that requires them to exercise their ideas expression and decision-making skills (Elola, 2010).

Wigglesworth and Storch (2009) investigated the use of collaborative writing in L2 writing classrooms by comparing the performance of two L2 writing groups in an identical task: one individually and the other in pairs. They collected data from 48 individual learners and 96 learners who were in pairs at a research university in Australia. They compared the tasks by examining the discourse analytic measures of fluency, complexity and accuracy. The results showed that learners could achieve higher level of accuracy if they worked with others in their writing task. In other words, they could produce a better piece of writing.

In a recent study conducted by Shehadeh (2011), the effectiveness of collaborative writing in L2 was assessed. In addition, learners' perception towards collaborative writing was investigated. The study consisted of 38 undergraduate students in two writing classes at a university in the UAE (United Arab Emirates). There were 18 students in one class and 20 students in the other (which was the control group). In the control group, students were required to finish their writing individually while the students in the experimental group could work in pairs. Finally, the writing quality of students' writing was examined in the areas of content, organization, grammar, vocabulary, and mechanics. The researcher found that collaborative writing had the most influence on content, organization, and vocabulary, but not on grammar or mechanics. Moreover, a majority of students in the study enjoyed writing collaboratively.

Process Writing and Peer Feedback

Revision has long been regarded as an important stage in the writing process (Bridwell, 1980; Soven, 1999; Taylor, 1981) as it is believed that writing should never be a linear process; instead it should be a recursive process which the writer should be able to go back to edit and revise his or her work so as to re-organize ideas and to discover and remake new ideas. Given the importance of revision, the process writing approach has been widely adopted in L2 writing classrooms (Atkinson, 2003). The process approach, as defined by Kroll (2001), is

that student writers engage in their writing tasks through a cyclical approach, . . . going through

stages of drafting and receiving feedback on their drafts, be it from peers and/or from the teacher, followed by revision of their evolving texts. (p. 220-221)

Hence, it is a process in which learners have to go through planning, drafting, revising and editing stages. Additionally, it emphasizes the importance of having a sense of audience and continual interaction with peers and the teacher. In particular, feedback is the core feature in the revision process (Liu & Sadler, 2003; Silva & Brice, 2004) because it can promote a sense of audience and encourage the interactions between the writer and audience.

As a tool for promoting and improving writing, peer feedback is especially an effective tool (Simmons, 2003). It allows student writers to share their writing with others, thus enhancing an awareness of audience and revision in the minds of the writers (Fletcher & Portalupi, 2001). Further, with the engagement in the process, the student writer could be more critical (Moran & Greenburg, 2008).

In L2 research, the results on the effectiveness of peer feedback in improving students' writing have generally been positive. In a study which explored the effectiveness of the use of peer review on L2 academic writing skills from 2001 to 2003 in a university in Singapore, the researcher found that "the students clearly recognized the value of peer review in improving their academic writing competence" (Hu, 2005, p. 339). Comparable results were reported by Lundstrom and Baker (2009), who conducted a study at an intensive English institute in the United States with 91 students in nine writing classes at two proficiency levels. Results indicated that L2 student writers could "improve their own writing by transferring abilities they learn when reviewing peer texts" (Lundstrom & Baker, 2009, p. 38).

Online Peer Review and Discourse

With the increasing application of technology to the education field, the time of e-learning has arrived, which definitely brings new insights into English writing instruction. Online peer review is one of the techniques that has been widely adopted for improving the efficacy of L2 writing. As the literature above suggests, the conventional face-to-face peer review is an essential element of writing classes, and the response and revising process has played a key role in improving the writing of student writers and developing their critical thinking (Rollinson, 2005; Wooley, 2007). However, despite the potential merits of peer review, the traditional face-to-face format is time consuming, and the student writers "from certain cultures may feel uncomfortable with . . . the social interaction demanded

by peer review” (Rollinson, 2005, p. 26). Hence, the emergence of digital technologies can help to alleviate these concerns by changing the face-to-face peer review to an online one.

There is an extensive literature showing that the online use of peer review is more beneficial to student writers than the conventional peer review. For instance, DiGiovanni and Nagaswami (2001) found from their study—which was conducted in two pre-college ESL writing classes at the Community College of Philadelphia—that there were a number of advantages of using online peer review. First, students became more committed and involved in the peer review tasks. Also, it was easier for teachers to monitor the peer review process if it was done online. Further, unlike the conventional face-to-face peer review, both student writers and the teacher could refer to the printouts for the comments of peer reviewers and assess the usefulness of peer comments more easily. Some researchers (e.g., Figl, Bauer, & Mangler, 2006; Guiller, Durndell, & Ross, 2008; Schultz, 2000) have also given their support for the use of peer review in an online format. For instance, Figl et al. (2006) pointed out that the digital peer review format helped in “tapping the full potential of the online version and benefiting from rich discussions among teams” (p. 12). As for the improvement of writing, Schultz (2000) maintained that online peer interaction is generally found to be more useful and helpful. This view is shared by Guiller et al. (2008), who compared the transcripts of online and face-to-face discussion and indicated that the online mode facilitated the development of critical thinking and that students like this mode of discussion more. Another study done by Liu (2005) comparing the performances of student writers in a pre-writing group using both the traditional and online communication modes showed that there was a more equal participation of student writers if the online communication mode was used.

As the merits of using online peer review have been further shown by research, online peer feedback is widely seen as a very essential feature in the field of L2 writing. This type of feedback can be extremely useful for fostering independent learning skills and improving writing (Milton, 2004; Hyland & Hyland, 2006). Furthermore, the conversational type of peer feedback can help to cultivate a “sense of community” and develop support systems (Hyland, 2000), as well as encourage collaborative learning (Tsui & Ng, 2000) as there are more interactions between students and students (Warschauer, 2002). Online peer feedback can also result in better writing as it promotes revision (Min, 2008) and a sense of audience (Ware, 2004).

A number of L2 studies have emphasized the value of peer discourse in the process of peer review.

There is a growing body of research exploring the relationship between online peer discourses and writing performance in order to assess the effectiveness of peer review. Nelson (2007) identified two major groups of peer discourse for the writing context which were cognitive and affective in nature: “(1) summarization, (2) specificity, (3) explanations, (4) scope” (p. 4) belonged to the cognitive aspect, while (5) “affective language” (p. 4), such as praise and criticism, was about the affective domain. Summary feedback was useful as it summarized the information that helped to improve the writing performance. Feedback specificity meant giving feedback for revising specific areas. Explanations were comments that helped to clarify or explain the feedback in detail. The scope of feedback referred to the evaluation from a narrow or global focus. A narrow focus referred to an emphasis on surface features while a global level meant a more holistic evaluation. Affective feedback included criticism, praise, and summary. Nelson (2007) pointed out that it was important to understand which types of feedback features possibly affected the revision process of learners. According to her, feedback should start with a summary of the evaluation of the writing performance and then specific feedback should be given with a global perspective. The location at which the problem was found should also be included. Finally, explanations should be given with all the details necessary for revision.

Liang (2008) developed a framework specific to the online writing context to examine the interaction discourse of 35 students from a freshman level English course in a university in Taiwan. The students were asked to comment on the summaries and revisions of one another in weblogs, and then two raters coded the peer comments using the six types of online interaction identified from the framework. They were: (1) meaning negotiation, (2) content discussion, (3) error correction, (4) task management, (5) social talk, and (6) technical study. The study found that most of the online discourse was about social talk and irrelevant discussion. Constructive negotiations and revisions seldom appeared (Liang, 2008).

As shown from the above research, online peer feedback has been useful for student writers in many aspects. It is thus worth investigating the discourse involved in the process so as to enhance the effectiveness of the use of online peer review.

Methodology

In this section, the research questions pursued in the study, the background of the participants, the procedures adopted, the data collection and analysis methods used are presented.

Research Questions

The study aimed to address three research questions:

1. What types of online discourse appeared in the peer review process of a writing classroom with Hong Kong ESL undergraduates?
2. What is the role of explicit instructions and training for producing quality online peer discourse?
3. What are the important elements that facilitate the production of quality online peer discourse?

Participants

The participants were 27 students, all female, enrolled in a 3-year Bachelor of Education program in Early Childhood Education, year 1, at the Institute of Education of Hong Kong. All of them were serving as full-time kindergarten teachers (one of them was a kindergarten principal) of Hong Kong and were doing the course on a part-time basis. The participants were students taking a 10-week course titled English for Early Childhood Education and taught by the writer of the study. The course consisted of three contact hours per week over a ten-week term in a language laboratory.

Procedures

Tasks. In the writing course, students received process writing instructions and participated in drafting and revising. Wiki embedded in Blackboard was used for posting students' work and getting peer comments on the work. Wiki is a web-based collaborative publication platform oriented to the production of user-written articles. There were two writing tasks for the study: group and individual writing tasks. The group writing task was conducted first and with two purposes: (a) to familiarize students with the drafting and revising process using Wiki in the Blackboard system, and (b) to act as an experimental task, examining if there were differences in the types and quality of peer comments after training for giving peer comments was given.

Group task. In the third session of the class, students were presented an article from the *South China Morning Post* titled "Obsessions that Kill a Child's Quality of Life." They were then divided into groups of three to five. Each group was asked to write a 300 to 350-word reaction to the article and post it online. This became the group's first draft. A total of seven group reports were received.

A week later, students were told briefly to comment on their peers' first drafts. They were told

generally to comment on the content rather than on grammar to help their peers rewrite their first drafts. By the fifth session, each group had to submit a second draft based on the comments of their peers. In the following week, the teacher commented on their second drafts. By the sixth session, each group submitted a final draft based on the teacher's comments.

Individual task. In the seventh session of the course, students were presented a parent's sharing on a blog titled "Kindergarten Admission Process and the Interview." Each student was asked to write a reaction to the article and submit it online before the end of the week. This became the individual's first draft.

In the eighth session, students were asked if the peer review for group work was useful. They were then shown sample comments and an editing checklist (Appendix A). There was a class discussion on the samples and on what made a quality comment. Students were then explicitly instructed to make three comments on the content and two comments on the organization, and after this they were free to comment on the grammar and style of their peers' work. Some time was allotted in class to make these specific comments online. They had the following three to four days to finish this task.

Each student wrote a second draft based on their classmates' comments and submitted it by the ninth session. In the following week, the teacher commented on their second draft online. Based on these comments, students rewrote them into a final draft to be submitted in the last session.

Training and provision of explicit instructions for the peer review process. The training for giving peer reviews, which was provided for students in the individual writing task, focused on developing an awareness of text revision by asking them to pay more attention to the content and organization of their peers' work since students tended to work on surface-level revision. To enhance students' awareness of the macro aspects of revision, which were content and organization, a training practice and explicit instructions for the number of responses in these two areas were given. The training practice was done in half of a lesson through class discussion between teachers and students on what quality comments were, followed by a reinforcement exercise on distinguishing useful comments from the given samples.

When reviewing their peers' individual writing drafts, the students were asked to provide comments for at least three pieces of work from the peers in their class. They made their own choices and worked alone. A revision guideline was given as a reference on what student reviewers should do, and teacher gave explicit instructions on what student reviewers were required to do in terms of the types and numbers of comments. They were reminded that the quality of their comments

would be graded and included as part of their scores. The students were given one lesson to start revising the work of their peers, and the teacher then acted as a guide in the lesson to check if they understood the process and to answer any questions they had in the process. At the end of the revision session, they were given three more days to continue commenting on their peers' drafts and post their comments in Blackboard. Every student writer could then access peer comments and revise his or her draft based on the useful comments. The revised draft (namely second draft) was then submitted online to the Blackboard system before the following lesson in Week 7.

Procedures for Data Collection

Peers' comments collected in this study were analyzed by content analysis. Four stages of content analysis were conducted in this study: coding, categorization, description and interpretation. A coding system developed by Liang (2008) was adopted and modified for use in this study. Nine categories were identified for the types of discourse that would occur in peer interactions: (1) Meaning negotiation, (2) Constructive content discussion, (3) Organization discussion, (4) Error correction, (5) Social remarks, (6) Irrelevant opinion/information, (7) Regurgitation, (8) General evaluation, and (9) Unclassified. Numbers 3, 6, 7, 8, and 9 were additional codes included in this study. Number 3 was used to accommodate the comments relating to the improvement of organization of ideas of the writing as it was the focal point of learning in the writing lessons. Numbers 6, 7, 8, and 9 were added to accommodate all comments that were not directly related to the writing revisions. Definitions and examples of each code are presented in Appendix B. The unit of analysis for the online discourses is referred to as a *segment* in this study. Using the modified coding

system, the researcher and a trained research assistant coded three pieces of comments from the participants independently, then reviewed all cases of disagreement and resolved the differences together. Finally, the research assistant helped to code all the comments. Almost all the segments included one type of interaction, but a few segments (less than 5%) included two types of interactions, which were counted as two segments.

A post-course questionnaire was administered at the end of the course to explore the attitudes towards the use of peer review. However, not all data acquired through the questionnaire were relevant to the present discussion, as my main focus was on the online discourse learners had in the peer review process. Hence only the responses of two questions regarding the usefulness of explicit instructions and training for the use of peer review were used in this study.

Results

The focus of this study was the learners' interaction through discourse in the peer review process. Specifically, the discourse types that appeared in the discussion of group and individual tasks were examined. The results were then compared to determine if the explicit instructions and training given by the instructor were helpful in producing better quality or quantity of responses. Table 1 provides a summary of the types of discourse from both group and individual tasks.

As shown in Table 1, the participants showed a greater awareness of making quality comments than they did prior to taking the training and instructions on peer review. However, it needs to be pointed out that non-revision related or non-constructive comments were still widespread in both group and individual comments.

Table 1
Types of Online Discourse

Types	Group		Individual	
	No. of occurrences	%	No. of occurrences	%
Meaning negotiation	9	3	20	5
Constructive content discussion	53	16	135	33
Organization	19	6	18	4
Error correction	3	1	42	10
Social remarks	50	15	29	7
Irrelevant opinion/information	39	12	7	2
Regurgitation	40	12	42	10
General evaluation	113	34	99	24
Unclassified	10	3	18	4
Total	336	100	410	100

Responses for the Group Task

In commenting on the group task, some participants had taken into account the content issue when commenting on others' work, as there were 16% and 3% for "constructive content discussion" and "meaning negotiation," respectively. However, they comparatively tended to give more frequent general evaluations (34%), such as praises and comments that were not very useful for revision. In addition, the participants also made a lot of social remarks (15%) in their responses such as, "I agree with you." Regurgitation and irrelevant information/opinion accounted for 12% each in the total responses.

Responses for the Individual Task

Different from the responses for the group task, the responses for the individual task mainly concentrated on constructive content discussion (33%). There were still a fair number of responses on general comments (24%), but the percentage dropped from 34% to 24%. The responses on social remarks and irrelevant comments and opinions also decreased significantly from 15% to 7% and 12% to 2% respectively. However, the appearance of regurgitations seemed almost the same (12% to 10%) in the two tasks. Another notable change is the number of responses on erroneous grammar, which changed from 1% in the group task to 10% in the individual task.

Influences of Explicit Instructions and Training on the Types of Peer Discourse

In order to determine if explicit instructions and training were useful for making responses of better quality and in greater quantity, the nine discourse types were categorized into constructive and non-constructive comments and were examined in both group and individual tasks (see Table 2). Types 1-4 were considered as constructive comments, as they were about meaning, content, organization, and error

correction, which were important feedback in improving written work. Types 5-9 were regarded as non-constructive comments, as they were about social remarks, irrelevant information/opinion, regurgitation, general evaluation, and unclassified information.

From the result, when comparing the responses for group and individual tasks, it was found that constructive comments increased more than double (from 25% to 52%) while non-constructive comments decreased by more than one-third (from 75% to 48%) in the responses to the individual task.

In addition, the ratio of constructive to non-constructive comments shifted from 1:3 to 1:0.9 (84:252 to 215:195) in the responses for the group task to the ones for the individual task. This shows that in the group task, for every constructive comment, there were three non-constructive comments. However, in the individual task, for each constructive comment, there were only 0.9 non-constructive comments.

Hence, there were more constructive comments on the individual task. Among them, 33% were on content discussion, and 10% were on error correction. It appears that the explicit instructions and training given by the instructor in the peer review session for the individual writing task was useful for helping learners to give responses in good quality and quantity. This finding is further confirmed by the responses of the learners to a post-course questionnaire on the use of peer review, as shown in Table 3. Two questions in the questionnaire asked about the usefulness of training and class instructions on giving peer review. Although there were 11 responses only, 73% agreed or strongly agreed that the instructions provided by the teacher in the provision of the types of peer comments were useful, and 64% regarded that the class discussion on "what a quality comment is" was useful. These findings showed that a majority of the respondents were satisfied with the training and class instructions provided in the peer review process.

Six students, who made facilitative peer revisions in their individual writing tasks, were randomly selected as an example to show the positive influence of the explicit instructions and training on their writing

Table 2
Constructive and Non-Constructive Comments in Group and Individual Tasks

Types	Group		Individual	
	No. of occurrences	%	No. of occurrences	%
Constructive (Types 1-4)	84	25	215	52
Non-constructive (Types 5-9)	252	75	195	48
Total	336	100	410	100

Table 3
Learners' Responses on the Use of Explicit Instructions and Training from the Post-Course Questionnaire

Question	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
The instructions given by the teacher in giving the types of peer comments were useful.	0%	0%	27%	55%	18%
The class discussion on "what a quality peer comment" was useful.	0%	0%	36%	55%	9%

text improvement. Table 4 shows the peer comments, which they capitalized on in their revisions and the comparison between their original and amended drafts.

Discussion

Results of the study are discussed with respect to the three research questions that guided this investigation.

Types of Online Discourse in the Peer Review Process

This study explored the types of online peer discourse in a writing class supported by the Wiki function of Blackboard system. Nine different types of online discourse were examined in this study. The types of discourse occurred in the tasks represented the understanding of learners on peer review. As described in the data presentation, the interactions amongst participants could mainly be found in general evaluations, which were basically useless for making revision. Some of them commented on content, but a majority of responses were on social remarks, regurgitations, and irrelevant opinions, which were categorized as non-constructive comments. Although the participants gave more constructive comments after receiving the training or instructions about what to do in the peer review process of the group task, a considerable amount of comments was still non-revision, which meant useless for making revisions. The frequent occurrence of these types of discourse could be mainly explained in relationship to the characteristics of Chinese students and the competency level of reviewers.

Characteristics of Chinese students. As we described earlier, it was meaningful to consider the nature of Chinese students in examining discourse generated via online discussion. Understanding the characteristics of Chinese students helped to guide us in deciding the best way of implementation of peer review in a Chinese context. A study done by Carson and

Nelson (1996) showed that Chinese learners were inclined to maintain the social harmony in groups, thus they were very careful in making comments and avoided making strong criticisms and disagreements. As a result, these kinds of characteristics affected the types of interactions they had in their peer discussions. Cotterall (1995) also found that Chinese learners were used to traditional a teaching method in which the teacher would direct all the things and students were supposed to follow the instructions. Thus, they did not know what to do when they were given the autonomy and would only trust their teacher's comments. Roskams (1999) agreed that cultural issues should be taken into consideration when planning collaborative learning activities, such as peer reviews, as some of the cultures did not allow public disagreement. The Chinese culture is one that teaches people not to provoke conflicts by giving disagreements or negative criticisms openly.

Competency of reviewers. The investigation results showed that a large amount of the comments from both individual and group tasks was about general evaluations, such as praises, while others were social remarks and irrelevant comments. This raises a question on the value of peer comments, for researchers (Leki, 1990; Nelson & Carson, 1998) believe that there is a strong relationship between comments and the reviewer's competence level. The comments from a highly competent peer might be perceived as similar to feedback by a teacher (Tsui & Ng, 2000). Thus, if students are more competent reviewers, they are able to produce revision-related comments which are deemed as constructive and useful. On the other hand, if students are not competent, they may not have processed the abilities to make useful comments on content development, organization of ideas and use of grammar. Hence, the value of feedback content correlates with the competence level of a peer. The competency of reviewers refers to the knowledge of the target language. As researchers (e.g., Nelson & Murphy, 1993; Zhu, 2001) have pointed out, L2 learners may not have sufficient knowledge to find out

Table 4
Examples of Facilitative Peer Revisions

Learner	Peer comments	Writing revisions
1	You haven't write the date of publication of the article. You also haven't put the title of the article within the quotation mark.	Original: I agree with Mrs Tall (Kindergarten Admission Process & The Interview – A Blog) Amended: I agree with Mrs Tall “Kindergarten Admission Process & The Interview” dated on July 31, 2011.
2	In the first paragraph, I think your response need more convincing, such as some example to say why you do not agree?	Original: I disagree with Mrs. Tall regarding the interview as a fun game to be in the right kindergarten for a bright future..... because I don’ t think of what she mentioned “most Hong Kong parents see kindergarten as the first stepping step to secure a rewarding career.” and “turn the interview and process into fun game.” is true. Amended: I disagree with Mrs. Tall regarding the interview as a fun game to be in the right kindergarten for a bright future..... because I don’ t think of what she mentioned “most Hong Kong parents see kindergarten as the first stepping step to secure a rewarding career.” and “turn the interview and process into fun game. ”. It’s so significant to be child oriented to develop talents, skills for self-caring,, joy of learning, problem solving instead just keen on the successful interviews of kindergartens over the ability working on paper work with competition in academics.
3	Maybe you can add more topic sentence to show the main idea in each part.	Original: As Maurice mentioned,” To many Hong Kong parents, getting their children into the right kindergarten is simply essential.” Therefore, parents are stressed from admission process until interviews..... Amended: Parent’s attitude towards children is the key to success in interviews. As Maurice mentioned,” To many Hong Kong parents, getting their children into the right kindergarten is simply essential.” Therefore, they put too much pressure on their children on revising the name of shapes and colors.
4	The conclusion not likes final, it seems suggests and also have something want to say.	Original: In conclusion, I want to use the term stated by Mrs. Tall that ‘ game’ to represent the kindergarten admission and interviews. Just like most of the games, victory requires abilities, strategies, preparation and luck, these are what parents and their children. Amended: Games are for us to ‘play’, if the ‘ players’ doesn’t enjoy the game, everything would become meaningless and the failure is the most liked ending. We shall see children’s individual nature as the main element of the ‘game’, teachers are there to choose the suitable ones joining the right schools. Showing the children’s real side is the right way to let them stepping the right way pointing to a bright future.
5	Your position should be clearly shown in the introduction paragraph. The author of that article should be Mrs. Tall.	Original: I refer to the letters of Maurice Walker (“Kindergarten Admission Process & The Interview”, July 31). Most Hong Kong parents see kindergarten as the first stepping step to secure a rewarding career. Amended: I refer to the letters of Mrs. Tall (“ Kindergarten Admission Process & The Interview”, July 31). I agree that most Hong Kong parents see kindergarten as the first stepping step to secure a rewarding career.
6	If you can put your own experience is better.	Original: From my point of view, parents should take suitable methods to teach kids and used to play interview as game for kids to get accustomed to it. Gradually when kids attend normal interview, they treat as if it were game and perform everything naturally. The result would be much better than expected. So if you are the parents, will you want to have things work and a half times? Amended: Being a kindergarten teacher, I have seen a lot of children who took part in the admission interviews, most of them were coy, not willing to talk to strangers. Parents should take suitable methods to teach kids and used to play interview as game for kids to get accustomed to it.....

Note. Information is presented without amendments. Changes made by student writers are in **bold**.

the errors made by their peers in their writings and provide useful comments for making revisions as they are still in the process of learning the target language. Thus they will be put in a difficult situation if they are asked to give comments on the others' writing.

The Role of Explicit Instructions and Training for Producing Quality Online Peer Discourses

From the results, it was found that students made more constructive and useful comments in the peer reviews of the individual tasks. This finding shows that explicit instructions and training have a positive impact on the quality of reviewers' comments. Similar findings have been reported on the usefulness of instructions and training to participants in a number of recent studies (Min, 2006; Rollinson, 2005). All these support the role of instruction (Van Steendam, Rijlaarsdam, Sercu, & Van den Bergh, 2010) on peer feedback quality. Nevertheless, only one attempt was used in the study to try out explicit instructions and training, and there were still a lot of non-constructive comments in the peer reviews of the individual tasks. In this regard, it seems to be helpful if more explicit instructions and training were given to peer reviewers repeatedly. Apparently, with more guidance and training, they could be more competent reviewers. The guidance and training could be compensatory mechanisms that mediate between peer comment content and reviewers' competence level. The primary objective of guidance and training is to maximize the effectiveness of the peer review activity (Rollinson, 1998). By means of informal discussions of sample peer comments, as well as in-class evaluation practices on peers' writing which require participants to note the types of comments that will be useful for student writers, the teacher can help build up the competency of peer reviewers. The teacher is in a position to bring out the quality of online peer discourse.

Elements Facilitating the Online Peer Response Groups

Despite the support given by the literature on the use of peer review in L2 writing instruction, which suggests that it can be a potential tool in teaching learners a wide range of skills important in the development of language learning and writing ability (Hu, 2005; Kamimura, 2006; Lundstrom & Baker, 2009), there are also criticisms on its usage when it has been tested more experimentally. Thus, it is essential for us to identify the elements that can facilitate the online peer response groups based on the findings of this study.

Training. One of the aspects that received most of the criticism is the inability of learners to produce

quality comments. My study and other research has found that peer reviewers tended to give very general evaluations. Training reviewers could be a possible way to improve peer review. Reviewers can learn either by trial and error or by working with experienced reviewers in the training session (e.g., Sluijsmans, Brand-Gruwel, van Merriënboer, & Martens, 2004; Zundert, Sluijsmans, & van Merriënboer, 2010) as it has been found that training positively influenced their motivation and writing skills. According to Hu (2005), training sessions have to be able to provide students with adequate understandings of the peer review process and its potential benefits. Peer review training can be started with a class discussion of the potential advantages and problems of peer review. An explanation of how peer review can be carried out and the teacher's expectations during and after peer review should be made clear to learners. Provision and explanation of response guidelines before each peer review assignment is a must. Training sessions can be grouped according to aims and functions. Awareness-raising activities should be added if learners are from Asian countries whose cultural norms may not comply with the pedagogical principles underlying peer review. Actual examples of good and poor peer comments should be provided to develop an understanding of how peer response might work. Sample written peer comments on excerpts of essays written by previous students can be discussed. Learners can also be asked to examine the revisions made by the previous students in response to the peer comments. To be effective, training activities should be done continuously for several times until learners are completely ready for the review process. Enabling ongoing communication between the teacher and learners and building a trustful environment in the training sessions are crucial for the success of the process.

Grading peer comments. Another possible technique that may help to enhance the effects of peer reviews is grading peer review comments. Reviewers will be more motivated to spend time in their peer review process if they know that their instructors will assess or even grade their comments. This is not only a way of increasing their accountability, but it is a method that can promote the production of more quality comments as most of the learners would strive to obtain a higher grade during their review process. "Effective grading . . . presents suggestions for making classroom grading fairer, more time-efficient, and more conducive to learning" (Walvoord & Anderson, 2010, p. xvi). The impact of such an instructional technique has been shown in this study as the amount of quality comments appeared more after explicit instructions on the types and numbers of comments required were given. Similar to other types of assignments, the instructor should present clearly to learners the task, his/her requirements

and grading rubrics for the peer feedback. The instructor should not check grammar accuracy only, instead he or she should focus on the usefulness of peer comments for student-writers. When learners know that the useful comments will result in higher scores, they will pay more effort in their peer review work.

Having enough set-up preparation. As Rollinson (2004) stated, peer review could be run more smoothly if the instructor organizes groups properly and establishes procedures that are effective. The instructor should make decisions on the establishment of groups (e.g., whether they are self- or teacher-selected) and the number of learners. Learners are different in terms of ability and cultures in different classes (even in the same class). There could be mixed-ability or same-ability groups or groups of four or five. The instructor has to help in the formation of groups that can maximize their effectiveness for learning and insure that they can work in a comfortable environment. As for procedures, issues to be considered will include: guidance to be provided to learners on the peer review process, the level of involvement of the instructor in the process, the number of drafts to be done, and the grading of feedback. Additionally, decisions will need to be made about how the peer review sessions are to be organized. The instructor will have to consider carefully if reviewers provide feedback independently or in groups before the process starts.

Limitations of the Study

It is clear that the present study is not devoid of limitations. The first limitation concerns the scale of this research project. Thus there is a doubt about the extent to which the findings can be generalized beyond the participants studied. The number of participants is too limited for broad generalizations as only 27 students were involved. Also, the participants were all female. This reflects the demographics of the class studied. The opinions of males may differ in important ways from those of females; these differences need to be explored further. The generalizability of these research findings is also limited because they were generated in an exploratory inquiry.

The second limitation has to do with the roles of the writer of the current study since she was the researcher and instructor. However, caution had been taken since the onset of the study to avoid the possibility of role conflict. For instance, a research assistant was invited to carry out data analysis to ensure the objectivity of the classification and interpretation of data.

Time constraints created another limitation in the study as the duration of the writing program was about 20 hours; another 10 hours were for training the speaking skills of the learners (as designed by the curriculum of the Institute) in the course. During the 20

hours, the participants had to learn how to write a response and finish one in groups and another individually. They then had to give comments on one another's work. Given the relatively short time and the fairly new materials and processes they had to learn and use, it seems quite good that they could manage to finish all on time. It is certain that with a longer writing course which spans two semesters instead of one, the results could be more valid and reliable.

Implications

One area in need of further examination is the use of peer review among students from the different or same ability groups in writing courses. While the usefulness of peer review was identified from the data, how this review can be effective in different or same ability writing groups in the peer review process was not explored. Future research needs to focus on how peer review can be employed in different or same ability groups and how this process might contribute to the learning of the writer and the reviewer during a peer review exercise. Vygotsky (1986) theorized that both the giver and receiver of peer feedback could learn from each other in the process as mutual scaffolding of learning occur within their zone of proximal development. A more detailed analysis of discourse strategies used by the different or same ability groups may extend our understanding of how peer review can effectively support the learning process of people of different or same abilities and what supports should be provided to them in the peer review process. It would also extend the ideas how people of different or same ability groups function in different types of discourse.

Further research is also needed to investigate the collaboration of peers in the peer review process. The purpose of this study was to examine the types of discourses found in peer discussions before and after explicit instructions and training were given. Hence, we can continue the process by examining the impact on revisions after different forms of explicit instructions and training are given. Collaborative learning theories support the use of peer review to enhance the writing skills of learners, but it is worth investigating if different forms of explicit instructions and training will bring out different learning outcomes in the process.

Conclusion

Three main conclusions were drawn from this study. Firstly, non-constructive peer discourse dominated the online interaction of the L2 students of my study. Though the situation became better after explicit instructions and training were given, a considerable amount of the peer feedback was still useless which did not lead to successful revisions in most cases.

Second, the impact of explicit instructions and training was positive. More instructions and training should be incorporated in the peer review process to lead to greater improvement. After the guidance and training, peer feedback appears to bring about a higher percentage of meaning-change revision. At the same time, students also find instructions and training useful in helping them to give more constructive comments.

Lastly, elements, such as providing continuous training, grading peer comments and having set-up preparation for the peer review process, are useful for learners to produce quality online peer discourse. To achieve an effective online course design, these elements should be incorporated into the course design as they can motivate and support learning (Koszalka, 2001).

As the advancement of technology continues and becomes more prevalent in our lives, the exploration of a variety of methods for studying the use of technology in different aspects will continue to increase. Further, I would very much like to see new teaching and learning strategies to fully engage the capabilities of the new devices. Continuing exploration of the technology in enhancing the effectiveness of learning is vital if we are to realize its full potential.

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JESSIE CHOI holds a doctoral degree in Education (Applied Linguistics and TESOL). She has been involved in English teaching in the Hong Kong tertiary level for more than ten years. Currently she is teaching English enhancement programs in the Institute of Education of Hong Kong. Jessie has taught undergraduate programs for second language learners in General English, Academic English and Business English. Jessie has research interests in peer writing, online learning, and the use of the computers in language education. She has conducted studies in online writing collaboration, peer discourse, and the use of e-portfolios.

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Appendix A
Peer Editing Checklist

This checklist is to help you evaluate your classmates' writing. Remember to offer at least 3 constructive suggestions on content/idea improvement and 2 on organization. After that, you can comment on the other areas, such as the use of grammar, mechanics and style.

1. Can you identify the main message in this response? Yes/No
2. If so, what is it?
3. Does this response have an introduction? Yes/No
4. Does the introduction give the position of the author? Yes/No
5. Does the introduction give the information of the source that the response refers to? Yes/No
6. Is the introduction clear and understandable? Yes/No
7. Are the main points given in the body paragraphs clear? If not, underline them and put a question mark next to them?
8. Does the response have a clearly organized main body, with ideas separated into paragraphs? Yes/No
9. Does each paragraph end with a transition sentence, smoothly connecting the ideas of the previous paragraph to the next? Yes/No
10. Are the arguments given in the response clear? Yes/No
11. Are the arguments given in the response convincing? Yes/No
12. If the response is not clear, what do you think the writer should do?
13. Does the response contain facts and data to support the claims made? Yes/No
14. Does the essay have a concluding paragraph? Yes/No
15. Does the conclusion restate the main points of the response in a new way and give a sense of completion to the essay? Yes/No

Appendix B
Coding Sheet

Code	Type	Description	Example
01	Meaning Negotiation	Check understanding, ask for clarification, confirmation/explanation	What do you mean by X?
02	Constructive Content Discussion	Propose thoughts, extend meaning. Suggestions that will enrich the content	If my friend is Harry, maybe I will believe him... You can do this/that...rewrite, add quote/content.
03	Organization	Comment on organization	You missed the introduction. Need coherence here.
04	Error Correction	Comment on grammatical errors	Lost "a". Tense, grammar, add punctuations.
05	Social Remarks	Check attendance, signal presence, humor, acknowledgement, agreement	I agree with you. Are you there? O.i c. byebye. Add oil Thank you. I like what you wrote.
06	Irrelevant Opinion/ Info	Opinion on general issues	Parents are too protective of their children.
07	Regurgitation	Repeat original	You mentioned XYZ. Quotations from the original.
08	General Evaluation	General rating/ comment of original with or without reasons	It's good! Well written. You are a good writer.
09	Unclassified	Incomprehensible	...

The unit of analysis is every single idea in a sentence. Double coding is allowed.

Science Teaching Beliefs and Reported Approaches Within a Research University: Perspectives from Faculty, Graduate Students, and Undergraduates

Gili Marbach-Ad, Kathryn Schaefer Ziemer, Michal Orgler, and Katerina V. Thompson
University of Maryland

This study explores and compares the perspectives of three populations (faculty members, graduate students, and undergraduates) toward science teaching in the College of Chemical and Life Sciences at a research-intensive university. In particular, we investigate the role of faculty professional development in reforming undergraduate science education. In Spring 2011, we collected data through an online survey of 71 faculty members, 99 graduate teaching assistants, and 288 undergraduates in their senior year. We used mixed mode data analysis to examine the perceived importance of skills for undergraduates as viewed by the three populations and the reported practices used by faculty and experienced by students. We found that across all three groups most of the respondents placed a high value on active learning and conceptual understanding, which is consistent with national recommendations. However, when comparing reported beliefs with reported practices, we found that faculty members do not always incorporate active learning techniques. In order to bridge this gap, we suggest providing faculty with professional development opportunities, moral support from peers, and instructional support from science education and instructional technology specialists. Our findings support this recommendation, as faculty who were in teaching-focused communities reported using innovative practices more than those not in communities.

This study examines the perspectives of three populations (faculty members, graduate students, and undergraduates) toward science teaching in a research-intensive university to investigate the role of faculty professional development in reforming undergraduate science education. We aimed to determine (1) what skills the three populations believed were most important for undergraduates to acquire; (2) what teaching approaches faculty members believed were most important; (3) what teaching approaches faculty members reported using; (4) what teaching approaches students reported experiencing, and if these were consistent with faculty reports; and (5) what professional development opportunities faculty believed would help them with their teaching.

There has been a strong national call (American Association for the Advancement of Science [AAAS], 2010; Association of American Medical Colleges and Howard Hughes Medical Institute Committee [AAMC-HHMI], 2009; Association of American Universities [AAU], 2011; National Academies, 2006; National Research Council [NRC], 2003; Presidential Council of Advisors on Science and Technology [PCAST], 2012; Woodin, Carter, & Fletcher, 2010) to improve professional development for university science, technology, engineering, and mathematics (STEM) faculty in response to research indicating a high level of dissatisfaction with the instructional methods used to teach STEM undergraduates (Seymour & Hewitt, 1997; Henderson, Beach, & Finkelstein, 2011; Henderson, Beach, Finkelstein, & Larson, 2008). More generally, national recommendations stress the importance of promoting critical thinking as an outcome of undergraduate study, especially through the following actions: (a) promoting conceptual understanding rather

than memorization of isolated facts (Ebert-May & Hodder, 2008; Mayer, 2002; Redish, 2003, Smith, Wood, & Knight, 2008; Wieman, 2007); (b) using active learning student-centered approaches, such as cooperative and collaborative learning, to engage students in their learning process (Freeman et al., 2007; Injaian, Smith, Shipley, Marbach-Ad, & Fredericksen, 2011; Jenson & Lawson, 2011; Kitchen, Bell, Reeve, Sudweeks, & Bradshaw, 2003; Knight & Wood, 2005; Senkevitch, Smith, Marbach-Ad, & Song, 2011; Udovic, Morris, Dickman, Postlethwait, & Wetherwax, 2002; Walker, Cotner, Baepler, & Decker, 2008); and (c) fostering an understanding of the nature of scientific research and its applicability to everyday life (AAAS, 2010; Handelsman, Miller, & Pfund, 2007).

Faculty Members' Beliefs About Teaching

Despite the repeated national calls to change teaching and adopt the above national recommendations, many faculty members are satisfied with traditional instruction, which is based mainly on lecturing, and remain skeptical of other methods (Hanson & Moser, 2003; Henderson et al., 2008; Luft, Kurdziel, Roehrig, & Turner, 2004; Miller, Martineau, & Clark, 2000). In most universities faculty rarely receive any formal training in teaching as graduate students or as faculty members (Cox, 1995; Golde & Dore, 2001; Handelsman et al., 2007; Luft et al., 2004), so the only model for them to replicate is what they experienced as undergraduates, which mainly involved extensive lecturing. The literature suggests that faculty beliefs toward teaching are constructed from these previous experiences as students (e.g., Adamson et al., 2003; Anderson & Helms, 2001; van Driel, Beijaard, &

Verloop, 2001). Bryan and Atwater (2002) described “beliefs” as the structure and content of a person’s thinking that are presumed to drive her/his actions. In accord with their definition, it is generally agreed that what teachers believe in—as it relates to their philosophy of teaching, their role within that process, the role and expectations of the students for learning, the role of science curricula, and context for instruction—will be an essential foundation for what occurs in their classroom (Blake, 2002).

Indeed, studies have shown that faculty beliefs are often closely aligned with their approach to teaching (e.g., Martin, Prosser, Trigwell, Ramsden, & Benjamin, 2000) and can impact student achievement both positively and negatively (Adamson et al., 2003; Brickhouse, 1990; Cronin-Jones, 1991; Gallagher & Richmond, 1999; Munby, Cunningham, & Lock, 2000; Tobin & McRobbie, 1996). For example, there is a growing body of evidence that when teachers believe in the value of student engagement, they are more likely to promote it in the classroom, and as a result students learn more effectively (Martin & Balla, 1991; Prosser, Trigwell, & Taylor, 1994; Trigwell, Prosser, & Taylor, 1994; Trigwell, Prosser, & Waterhouse, 1999).

Faculty beliefs about teaching can be influenced by their experiences in the classroom. In particular, beliefs may be shaped by classroom situations that challenge an instructor’s ability to teach effectively, including students with insufficient background preparation, the reluctance of students to review material from previous lessons before the new lesson, the diversity of the student population, and high enrollment in classes (Hativa, 1993).

Faculty beliefs about teaching are also influenced by other factors, such as the discipline to which the faculty member belongs. For example, there are significant differences between disciplines in terms of course goals, attitudes of faculty towards instruction, and practices used in the classroom that emerge from the distinctive characteristics of a discipline (Angelo & Cross, 1993; Stark, 2000). Donald (2002) acknowledged that there are differences across disciplines also in terms of ways of thinking, which in turn can influence how faculty members in each discipline approach student instruction. Stark (2000), in a survey of 2,105 introductory undergraduate course instructors, found that faculty attributed the different approaches they used in their classroom to their own scholarly background and their preparation for their career path (as either a scholar or a practitioner). Hativa (1993), looking at mathematics and the physical sciences, claimed that even highly similar science disciplines might have different disciplinary traditions and cultures that affect instruction.

Because of the tight link between teaching beliefs and practices, changing faculty beliefs about teaching is a necessary first step in reforming undergraduate

education. However, changing beliefs alone is insufficient for stimulating substantive teaching reform since changing teaching practices requires a substantial investment of faculty time and energy. University faculty typically work on their teaching in isolation (Allen & Tanner, 2006), which makes it more difficult for them to learn about innovative teaching approaches and gain the confidence required to implement those approaches in the classroom. Therefore, professional development opportunities and the support of colleagues are necessary to nurture sustainable changes in undergraduate science education (Wieman, Perkins, & Gilbert, 2010).

Disciplinary Teaching and Learning Centers and Faculty Learning Communities

One of the most powerful approaches for faculty professional development in higher education has been the establishment of teaching and learning centers (Cross, 2001; Singer, 2002). Since their inception in the 1960s, teaching and learning centers have grown in scope and prominence. Some are comprehensive in nature and provide workshops, seminars, individual consultation, and a variety of other programming to support the teaching efforts of new, experienced, and future faculty (Graf, Albright, & Wheeler, 1992). Others are organized around specific educational themes such as writing, instructional technology, problem-based learning, or expansion of graduate education to include training in teaching (Singer, 2002). Teaching and learning centers play a critical supporting role in educational reform by raising faculty awareness of national recommendations and providing monetary, technical, and peer support. Furthermore, their visibility lends credibility to teaching as a scholarly endeavor (Hutchings & Shulman, 1999).

At our university, we have established a disciplinary Teaching and Learning Center (TLC) in the chemical and biological sciences that exposes faculty to nationally recommended innovative teaching approaches and then helps them incorporate these approaches in their classrooms. To facilitate this process, the TLC provides individual assistance to faculty members, including helping faculty members assess the impact of innovative teaching techniques on student learning. To encourage the integration of teaching and research among faculty, the TLC invites nationally recognized teacher/scholars to campus to present their scholarly work in teaching. The TLC also offers opportunities for faculty and graduate students to attend teaching workshops and present their research on teaching and learning at national conferences. Moreover, the TLC has been instrumental in establishing long-term Faculty Learning Communities (FLCs) that support faculty in adopting new teaching strategies and implementing major curriculum reforms.

Faculty learning communities (FLC) represent groups of colleagues (usually six to 15 people) who are engaged in the active process of learning and collaborating, and who share an enterprise that they believe is worth pursuing (Cox, 2004). For some FLCs, this can encompass creating new pedagogies, designing new curricula, and assessing the impact of educational reforms (Tagg, 2010). Most importantly, FLCs encourage faculty members to become thoughtful, reflective practitioners of teaching (Ash, Brown, Kluger-Bell, & Hunter, 2009; Henderson & Dancy, 2008; Lee, 2006; Silverthorn, Thorn, & Svinicki, 2006; Sirum, Madigan, & Kliensky, 2009; Tagg, 2010; Wenger, 1998). The ideas behind FLCs are based on the conceptual framework of the social theory of learning and communities of practice, a term coined by Lave and Wenger (1991). *Communities of practice* are defined as “groups of people who share a concern, a set of problems, a passion about a topic and who deepen their knowledge and expertise in that area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4). Wenger (1998) identified three characteristics of communities of practice: mutual engagement, a joint enterprise, and a shared repertoire. In order to be a member of a community, including an FLC, there must be mutual engagement or interactions with other members of that community. The members of the community must also be engaged in a joint enterprise or common purpose as defined by the participants. Finally, communities of practice develop routines, words, tools, actions, or concepts that serve as a shared repertoire of resources. Through these elements, communities of practice provide a way for members to engage, learn, and grow in their personal and professional development.

In this study, conducted 5 years after the creation of the TLC, we sought to investigate beliefs about, and use of, approaches that promote active engagement, as viewed by three different populations involved in undergraduate education (faculty, graduate teaching assistants [GTAs], and undergraduate students). In our institution, faculty members are the primary instructors for the lecture components of science courses, while GTAs working under the direct supervision of faculty provide most of the instruction in laboratory and recitation sections. Undergraduate students are the recipients of instruction, but they also influence instruction in that their attitudes and expectations can affect the willingness of faculty to experiment with different teaching approaches. This research is unique in capturing of the perspectives of three intertwined populations. We were interested in the perspectives of each of the three populations, because change is not only difficult for instructors (faculty and GTAs), but also for the students (Welsh, 2012).

As mentioned before, instructors’ resistance to change stems from a variety of concerns. First, they

fear that active learning prevents them from covering as much content as they would with lecture. Second, they lack sufficient preparation time to develop or adapt active-learning activities for their class. High course enrollment, classroom size, and inability to adjust the positions of seats further limit student engagement. Finally, faculty may worry about how their colleagues will view this new commitment to teaching reform (Sutherland & Bonwell, 1996), how student evaluations might be influenced (Qualters, 2001), and, consequently, how their promotion and tenure may be affected (Austin, 2011; Boice, 2011). Students are also resistant to change, and do not necessarily appreciate the benefits of evidence-based teaching approaches (Qualters, 2001). In a recent study of 492 science undergraduates at the University of British Columbia, only about 40% perceived in-class active learning techniques as important or very important in positively influencing their academic performance, while roughly 30% considered them unimportant or slightly important (Welsh, 2012). To our knowledge, no previous study has simultaneously examined the education goals and experiences of these three populations.

Research Questions

In spring 2011 undergraduate seniors, GTAs, and faculty in the chemical and biological sciences were surveyed to investigate the following research questions:

1. What do each of the three populations believe are the most important skills for undergraduates to acquire? Do these beliefs differ within and between populations?
2. What do faculty members believe are the most important teaching approaches? Are there differences among faculty attributable to gender, discipline, rank, or community membership?
3. What teaching approaches do faculty members report using?
4. What teaching approaches did undergraduate students experience, and are these consistent with faculty reports?
5. What professional development opportunities do faculty believe would help them with their teaching?

Methods and Data Sources

Context of the Study

Our university enrolls 25,000 undergraduate and 9,900 graduate students in 111 undergraduate and 96 graduate programs. Within the chemical and biological sciences there are 165 faculty members (32% female), about 2,400 undergraduates pursuing majors in the

biological sciences, and about 400 undergraduates pursuing majors in biochemistry and chemistry. There are about 130 graduate teaching assistants (experienced and new) in biological sciences and 84 in chemistry and biochemistry. In 2006, we established a college-based Teaching and Learning Center to bring focus to teaching activities in the chemical and biological sciences and help create new opportunities for faculty and graduate student development. One of the major activities of the TLC is to help establish and support faculty teaching and learning communities. It does so by providing science education consulting, funding for faculty to attend conferences and workshops, opportunities for dissemination, and advice on grant writing and assessment. Faculty teaching and learning communities focus variously on thematically linked sequences of courses in the upper-level curriculum, gateway introductory courses, the interface between related science disciplines (e.g., bio-math, bio-physics), and the training of future faculty.

Sample

The sample included 288 undergraduate seniors who graduated in spring 2011 (approximately a 75% response rate), 99 GTAs (45% response rate), and 71 faculty members (43% response rate). The surveys were conducted online. Faculty and graduate students were recruited through direct emails that provided a link to the survey. To increase participation, the dean of the college also sent an email message to all faculty and graduate students encouraging them to complete the survey. As an additional incentive, all faculty and graduate students who completed the survey had the option of entering their names into a lottery to win a book award, with four awards offered for each population. We attribute the relatively high percent of participation to the combination of these methods. Undergraduate students in their senior year were asked to respond to the survey as part of their graduation clearance process. While completion of the survey was optional, they were encouraged to complete it as a way of providing feedback on their experiences to help the college administrators improve the undergraduate

experience. They received several email reminders about the survey in the weeks leading up to graduation. The demographics of survey respondents were representative of the overall undergraduate senior, GTA and faculty populations (see Table 1).

The faculty members belonged to four departments: cell biology and molecular genetics (33%), biology (31%), entomology (8%), and chemistry and biochemistry (28%). Distribution by faculty rank was non-tenure-track lecturers (30%), professors (31%), associate professors (24%), and assistant professors (15%). Thirty-six faculty members (51% of responding faculty) reported that they belonged to at least one faculty teaching and learning community. Faculty participated in communities built around thematically-linked sequences of courses ($n = 14$), gateway introductory courses ($n = 9$), interdisciplinary teaching ($n = 11$), and cross-cutting campus initiatives ($n = 13$).

Research Instrument and Data Analysis

Three separate surveys were developed for faculty, GTAs, and undergraduates. The surveys for faculty and graduate students were anonymous, while the survey for undergraduates was not anonymous. Some items differed slightly depending on the audience; however, we tried to keep the items as similar as possible for comparison. The survey for faculty (i.e., Science Teaching Beliefs and Practices, STEP) included 28 items, the survey for GTAs included 22 items, and the survey for undergraduates included five items related to this study as well as additional questions for internal program evaluation (the surveys are available upon request from the authors). All surveys included Likert-scale questions and open-ended explanations. The surveys were developed through an iterative process and reviewed for face validity by experts in the sciences (i.e., department chairs, faculty members, and an outside evaluator), education (i.e., graduate student and statistician), and psychology (i.e., graduate student and outside evaluator). Validity and reliability were established through pilot studies (e.g., Marbach-Ad, Schaefer Ziemer, & Thompson, 2012).

Table 1
Demographic Information for Undergraduates, GTAs, and Faculty Survey Respondents

		Seniors ($n = 288$)	GTAs ($n = 99$)	Faculty ($n = 71$)
Gender	Female	58%	65%	37%
	Male	42%	35%	63%
Science discipline	Chemistry and biochemistry	18%	34%	28%
	Biological sciences	82%	62%	72%

In the pilot survey for faculty (STEP-pilot), we asked the participants to reflect on what is important for undergraduate students to acquire through their studies, and we included “critical thinking” as one of the options they could select. However, critical thinking represents a broad concept that encompasses multiple different learning outcomes. We felt that we needed to conduct a finer-grained analysis of educational outcomes. Therefore, in the revised survey used here (STEP), instead of asking about the value of undergraduates acquiring critical thinking skills, we asked about specific components of this larger skill (i.e., understanding the dynamic nature of science, interpreting graphs, understanding major scientific concepts, and connecting course content to everyday life and to scientific research). The specific list of skills was drawn from the responses of the faculty to the STEP-pilot survey and from national recommendations on scientific teaching as a way to develop critical thinking (Handelsman et al., 2007; Wieman, 2007). Similarly, instead of asking about using active learning in the classroom generally, we asked about specific active learning approaches such as working in groups, using real-life problems, asking students to interpret graphical information, and fostering in-class and out-of-class discussions. Previous studies have found that when instructors use these approaches, students have deeper understanding, more well developed professional skills, and greater motivation, engagement, and confidence (e.g., Gilardi & Lozza, 2009; Gulikers, Kester, Kirschner, & Bastiaens, 2008; MacFarlane, Markwell, & Date-Huxtable, 2006).

We analyzed the data using mixed-methods analysis. For qualitative analysis of the open-ended questions, we used a modified content analysis strategy (Ryan & Bernard, 2000), in which we grouped related

responses into subcategories that could be quantified. A graduate student from the College of Education, a graduate student in biology, an outside evaluator from psychology, and two science education faculty members categorized the responses separately and then discussed their categories until they came to agreement. Their inter-rater agreement was 90%.

The quantitative data was obtained from the Likert-scale and multiple-choice questions. We compared beliefs between and within populations using multiple analysis of variance (MANOVA). When the overall MANOVA was significant, we followed up with univariate ANOVA on each variable of interest to identify those with significant effects. We used Tukey’s HSD and *t* tests to determine significant differences between means. We investigated the factors influencing reported teaching approaches using ANOVA. The degree of agreement between the rankings of different populations was investigated with Spearman correlations. For reporting results, we provide both means and percent of responses to highlight differences between groups.

Results

Below we present the findings according to our research questions.

Research Question 1

Our RQ1 was: What do each of the three populations believe are the most important skills for undergraduates to acquire? Do these beliefs differ within and between populations? We asked faculty, GTAs and undergraduate seniors to rate the importance of several educational skills (see Table 2) on a scale of

Table 2
Senior, GTA, and Faculty Ratings of the Importance of Skills for Undergraduates

Skills for undergraduates	Percentage rating skill as <i>important or very important</i>			Importance score		
	Seniors	GTAs	Faculty	Seniors <i>M (SD)</i>	GTAs <i>M (SD)</i>	Faculty <i>M (SD)</i>
Acquiring major scientific concepts	96%	94%	99%	4.7 (0.6)	4.6 (0.7)	4.7 (0.5)
Understanding how science applies to everyday life	82%	82%	88%	4.3 (0.9)	4.3 (0.8)	4.3 (0.7)
Understanding the dynamic nature of science	85%	83%	84%	4.4 (0.8)	4.3 (0.8)	4.3 (0.8)
Honing scientific writing	78%	81%	83%	4.2 (0.9)	4.2 (0.8)	4.3 (0.8)
Learning basic sets of lab skills	89%	69%	61%	4.4 (0.7)	3.9 (1.0)	3.7 (1.0)
Working in groups	50%	70%	55%	3.3 (1.2)	3.9 (1.0)	3.5 (1.1)
Memorizing basic facts	72%	46%	30%	4.0 (0.9)	3.3 (1.0)	3.0 (1.0)
Remembering formulas, structures, and procedures	49%	24%	19%	3.4 (1.1)	2.8 (1.0)	2.6 (1.0)

Note. Percentages reflect combined categories 4 (*important*) and 5 (*very important*).

1 to 5, where 1 = *not important* and 5 = *very important*. In reporting the percentage of participants who placed importance on each skill, we combined categories 4 (*important*) and 5 (*very important*).

A large majority of the three populations rated the following skills as important or very important: acquiring major scientific concepts (faculty = 99%, GTAs = 94%, seniors = 96%), understanding how science applies to everyday life (faculty = 88%, GTAs = 82%, seniors = 82%), understanding the dynamic nature of science (faculty = 84%, GTAs = 83%, seniors = 85%), and hone scientific writing (faculty = 83%, GTAs = 81%, seniors = 78%). All of these skills align with national recommendations for science education, and some of them are specific to science disciplines (i.e., understanding the dynamic nature of science and scientific writing) and are integral to conducting scientific research.

Seniors differed from faculty and GTAs in their ratings of memorizing basic facts (faculty = 30%, GTAs = 46%, seniors = 72%), learning basic sets of lab skills (faculty = 61%, GTAs = 69%, seniors = 89%) and remembering formulas, structures, and procedures (faculty = 19%, GTAs = 24%, seniors = 49%). Seniors rated memorization, lab skills, and learning formulas as significantly more important than did faculty ($F = 31.92$, $df = 425$, $p < .001$; $F = 20.34$, $p < .001$; $F = 21.64$, $p < .001$, respectively) and GTAs ($F = 19.30$, $df = 425$, $p < .001$; $F = 29.67$, $p < .001$; $F = 22.79$, $p < .001$, respectively). We suspect that seniors were more likely to consider these skills important because it reflects the way that they approached learning as undergraduates. Especially in the introductory courses, but also in many of the upper-level courses, they are required to memorize scientific terminology, facts, and technical procedures. At the graduate level, we believe that students have already developed this foundation and can move beyond it.

A higher percentage of graduate students (70%) rated working in groups as important as compared to

seniors (50%) and faculty (55%). GTAs rated group work as significantly more important than seniors ($F = 10.94$, $df = 425$, $p < .001$), while faculty were intermediate and did not differ significantly from either of the other groups. Given the collaborative nature of modern science, it is not surprising that the majority of graduate students recognize the importance of group work. However, it was surprising that faculty members and seniors did not give group work higher importance. This may reflect the logistical difficulties of designing and facilitating productive group work in large undergraduate classes, which may influence the attitudes of seniors and faculty towards group work.

MANOVA revealed no significant main effect or interaction effect for gender across all three populations. Across all three populations, those in the chemical sciences rated learning basic sets of lab skills and remembering formulas, structures, and procedures as significantly more important than those in the biological sciences, $F = 18.43$, $df = 425$, $p < .001$ and $F = 28.62$, $df = 425$, $p < .001$, respectively.

Research Question 2

Our RQ2 was: What do faculty members believe are the most important teaching approaches? Are there differences among faculty attributable to gender, discipline, rank, or community membership? We asked faculty to rate the importance of various teaching approaches (see Table 3) on a scale of 1 to 5, where 1 = *not important* and 5 = *very important*. The three teaching approaches that faculty rated as having the greatest importance were communicating course goals and objectives to students, relating course material to scientific research, and relating course material to real world applications ($M \geq 4.0$). Extensive lecturing was rated as the least important teaching approach ($M = 2.6$).

We explored whether faculty characteristics predicted their rating of the importance of these

Table 3
Means and Standard Deviations for Faculty Ratings of the Importance of Various Teaching Approaches for Educating Undergraduate Students

Importance of approach to teaching undergraduate students	<i>M (SD)</i>
Communicating course goals and objectives to students	4.4 (0.7)
Relating course material to scientific research	4.1 (0.7)
Relating course material to real world applications	4.0 (0.8)
Using different types of teaching methods	3.8 (1.0)
Gauging students' background knowledge	3.7 (0.9)
Using different types of assessments for grades	3.5 (1.2)
Using ungraded assessments to give students feedback	3.1 (1.2)
Using a historic perspective	3.0 (1.0)
Using extensive lecturing	2.6 (1.0)

Note. Rated on a scale from 1 (*not important*) to 5 (*very important*).

approaches. We conducted a MANOVA with the following faculty characteristics as predictors: gender, membership in a community, faculty rank (lecturers vs. tenure-track), discipline, course type (lab vs. lecture), course level (introductory vs. upper level), course size (< 60 students vs. > 60 students). Because of the large numbers of potential predictor variables, we conducted a backwards stepwise procedure to identify the subset of predictors with greatest explanatory power. By this procedure, gender, discipline, course type, course level, and course size were eliminated from the overall model, leaving membership in a community ($F = 2.7241$, $df = 9, 52$, $p = .0111$) and faculty rank ($F = 2.9412$, $df = 9, 52$, $p = .0067$) as significant predictors.

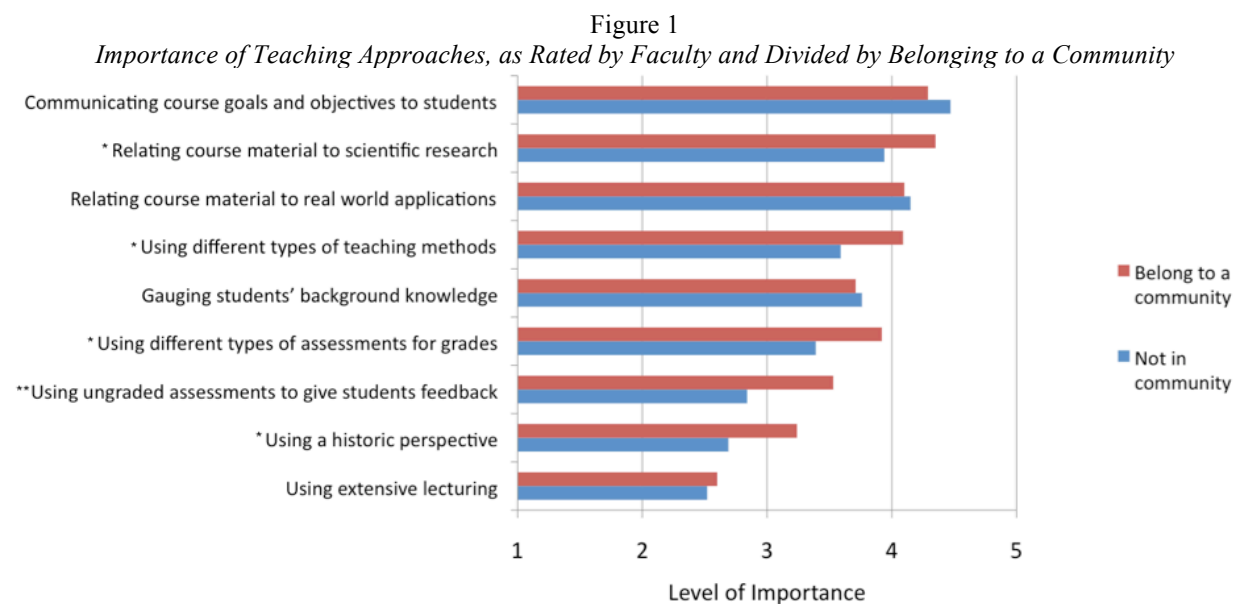
Faculty who were members of a teaching community rated the following approaches as significantly ($p < .05$) more important than those who were not members of a community (see Figure 1): relating course material to scientific research (community = 4.3 ± 0.6 ; not community = 3.9 ± 0.7), using different types of teaching methods (4.1 ± 0.8 and 3.6 ± 1.1 , respectively), using different types of assessments for grades (3.8 ± 1.0 and 3.4 ± 1.2 , respectively), using ungraded assessments to give students feedback (3.5 ± 1.0 and 2.7 ± 1.2 , respectively), and using a historic perspective (3.3 ± 1.0 and 2.7 ± 0.9 , respectively). All of these approaches are considered best practices by recent national recommendations.

Lecturers rated the following approaches as significantly ($p < .05$) more important than tenure-

track faculty (see Figure 2): communicating course goals and objectives to students (4.6 ± 0.5 and 4.2 ± 0.7 , respectively), using different types of teaching methods (4.1 ± 0.8 and 3.6 ± 1.0 , respectively), using different types of assessments for grades (4.1 ± 0.9 and 3.3 ± 1.1 , respectively) and using ungraded assessments to give students feedback (3.5 ± 1.3 and 2.9 ± 1.1 , respectively). These differences were independent of membership in a faculty teaching community.

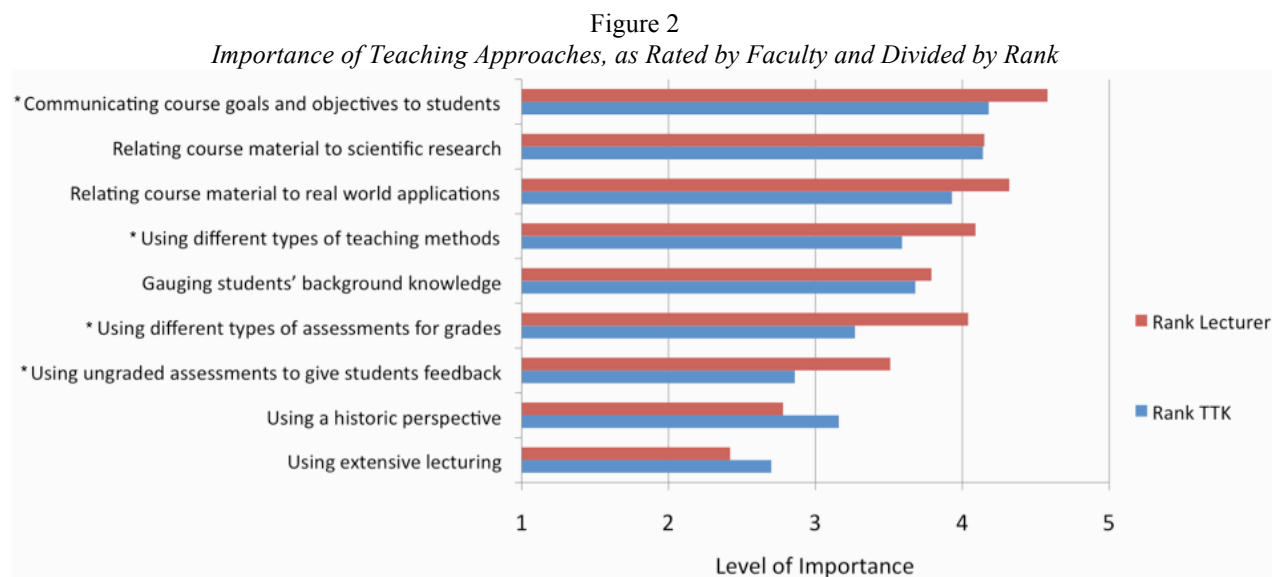
Research Question 3

Our RQ3 was: What teaching approaches do faculty members report using? We asked faculty members how often they used each of 16 teaching approaches (Table 4) on the following scale: 1 = *not used*, 2 = *once per semester*, 3 = *a few times a semester*, 4 = *most class sessions*, and 5 = *almost every class session*. Table 4 shows the means of the scaled responses. The five teaching approaches that faculty reported using the most frequently included answering questions from individual students in class (4.6 ± 0.5), extensive lecturing (4.5 ± 0.8), communicating course goals and objectives (3.5 ± 0.9), asking students to interpret graphical information (3.4 ± 1.0), and class discussions (3.4 ± 1.2). The least used teaching approach was reflective writing/journaling (1.4 ± 0.8). Teaching approaches that were used with intermediate frequency included group work during class (2.4 ± 1.3) or outside of class time (2.4 ± 1.4). Faculty reported



Note. Rated on a scale from 1 (*not important*) to 5 (*very important*).

* $p < .05$. ** $p < .01$.



Note. Rank divided by lecturer vs. tenure and tenure-track faculty (TTK). Rated on a scale from 1 (*not important*) to 5 (*very important*).

* $p < .05$.

Table 4
Faculty Responses to Their Use of Classroom Teaching Approaches

Teaching Approaches Faculty Report Using	<i>M (SD)</i>
Answering questions from individual students in class	4.6 (0.5)
Extensive lecturing	4.5 (0.8)
Communicating course goals and objectives	3.5 (0.9)
Asking students to interpret graphical information	3.4 (1.0)
Class discussions	3.4 (1.2)
Multimedia instruction	2.8 (1.2)
Real-life problems	2.5 (1.3)
Group work during class time	2.4 (1.3)
Group work outside of class time	2.4 (1.4)
Debates in class	2.0 (1.2)
Out of class discussions	2.1 (1.4)
Personal Response System	2.0 (1.6)
Graphic organizers	1.6 (1.0)
Online modules with immediate feedback	1.6 (1.2)
Games, simulations, role-play	1.5 (0.9)
Reflective writing/journaling	1.4 (0.8)

Note. Means were calculated based on the following scale: 1 = *not used*, 2 = *once per semester*, 3 = *a few times a semester*, 4 = *most class sessions*, and 5 = *almost every class session*.

using group work less frequently than might be expected given the emphasis on the importance of collaboration in the science education literature. This tendency is in accord with faculty's lower rating of group work importance (see RQ1). We found strong correlations between faculty's rated importance of group work and its use in class and outside of class, $r = .46$, $p < .01$ and $r = .31$, $p < .05$, respectively.

To investigate the effect of our predictor variables on use of different teaching approaches, we subdivided the approaches into two categories. The first category consisted of fairly traditional, teacher-centered approaches (extensive lecturing, communicating course goals, answering questions from individual students), while the second category consisted of the remaining 13, more student-centered approaches. For each

category, we created an index variable consisting of the sum of the ratings for the frequency of use of the approaches within that category. Faculty who belonged to a community used student-centered approaches more frequently than did faculty who did not belong to a community, $F = 4.97$, $df = 1, 47$, $p < .05$ (see Figure 3). There was no effect of belonging to a community on the frequency of use of teacher-centered approaches.

To understand how communities promote the use of these teaching approaches, we analyzed faculty's qualitative responses ($n = 18$) about the benefit of community participation. Although we had a small sample size, three main themes emerged from faculty's qualitative responses:

1. The community provided faculty with the opportunity to learn from others' experience: "This community gets me thinking about ways to make my teaching more interesting and more effective. I get ideas that I don't get any other place"; and, "I gain ideas that I can implement in my classes and share with colleagues."
2. The community enhanced funding opportunities available to groups of faculty to develop innovative activities: "The community also provide synergistic interactions and brainstorming opportunities that often result in grant proposals to further our efforts"; and, "Our group has acquired funding to help our

curriculum development initiatives, and I have been able to attend several conferences as a result."

3. The community promoted synergy between lecturers and tenure-track faculty. A tenure-track faculty member reflected, "As a researcher who teaches, I learn about the field of science education and current approaches to improve learning and literacy." One of the lecturers noted that the collaboration with tenure-track faculty allowed her to bring cutting-edge research into the classroom.

Research Question 4

Our RQ4 was: What teaching approaches did undergraduate students experience, and are these consistent with faculty reports? Students were asked how often their instructors used each of the 16 teaching approaches (see Table 5) using the following scale: 1 = *none of my courses*, 2 = *rarely*, 3 = *sometimes-mostly in introductory courses*, 4 = *sometimes-mostly in upper-level courses*, and 5 = *in most courses*. In order to compare faculty responses and students' responses, we combined the top three categories in each scale. For students, the combined categories 3, 4, and 5 reflected teaching approaches that were encountered at least sometimes in the undergraduate curriculum. For faculty, the combined categories of 3, 4, and 5 reflected teaching approaches that were used at least a few times

Figure 3
Frequency of Reported Use of Teacher-Centered and Student-Centered Instructional Approaches by Faculty Members Belonging to Teaching Communities and Those Not Belonging to Communities

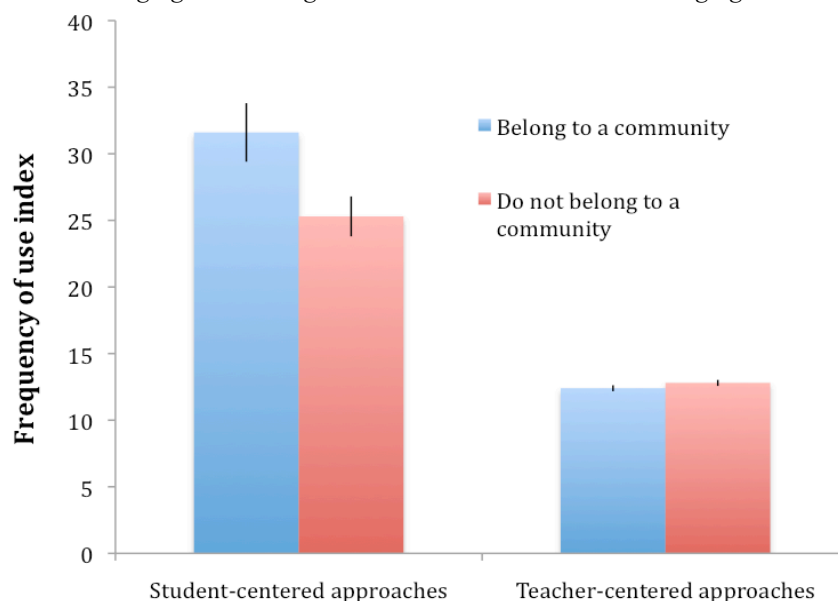


Table 5
Ranking of the Teaching Approaches Reported by Faculty and Seniors Based on Percentages of the Combined Top Three Categories

Teaching approach	Faculty (%)	Rank	Seniors (%)	Rank
Answering questions from individual students in class	100	1	82	4
Extensive lecturing	98	2	95	2
Communicating course goals and objectives	90	3	95	1
Asking students to interpret graphical information	90	4	84	3
Class discussions	87	5	74	7
Multimedia instruction	72	6	73	8
Real-life problems	61	7	75	6
Group work during class time	53	8	56	11
Group work outside of class time	49	9	69	9
Debates in class	39	10	33	14
Out of class discussions	38	11	39	13
Personal Response System	30	12	82	5
Graphic organizers	28	13	47	12
Online modules with immediate feedback	21	14	63	10
Games, simulations, role-play	18	15	18	16
Reflective writing/journaling	12	16	29	15

Note. Percentages for faculty included the responses of *a few times a semester, most class sessions, and almost every class session*, while those for seniors included *sometimes-mostly in introductory, sometimes-mostly in upper level, and in most courses*.

a semester in the faculty member's course. The scales for the two populations are not completely analogous because faculty members reported on one course that they taught, whereas seniors reported on their collective undergraduate experience; however, they do provide insight into the faculty and student perceptions of the prevalence of different teaching practices.

The four most frequently used teaching approaches reported by both students and faculty were answering questions from individual students in the class, extensive lecturing, communicating course goals and objectives, and asking students to interpret graphical information. The two teaching approaches that both faculty and students reported were least frequently used were games, simulations and role-play, as well as reflective writing/journaling. There were two teaching approaches in which there was a large discrepancy between faculty and student reports: online modules with immediate feedback and personal response system (students = 63%, faculty = 21% and students = 82%, faculty = 30%, respectively). We attribute this difference to the fact that faculty reported only on one of their courses, which could have been a lab course or small class, whereas the students reported on their collective experience across their entire undergraduate degree program. When we looked at the individual response categories, we found that these two teaching approaches were encountered by students mostly in introductory courses.

We ranked the teaching approaches according to their frequency of use as reported by students and

faculty (see Table 5). These rankings were highly correlated ($r = .82, p < .001$); therefore, the student reports provide corroboration for faculty reports on the teaching approaches that are used in the classroom.

Research Question 5

Our RQ5 was: What professional development opportunities do faculty believe would help them with their teaching? We explored faculty ideas for professional development opportunities through an open-ended question. Of the 23 faculty members that responded to this question, six reported that they would benefit from joining a community with responses such as the following:

We need to improve coordination among classes. There still appears to be a significant problem with redundancy, apparently driven by variation in what students learn from class to class. I will admit that I'm really not sure what knowledge instructors in subsequent classes expect students to come away from my class with.

Another faculty member responded, "I would think that working groups would help, where a period of time is used to develop a course in a group with someone experienced who can give feedback about the course organization." Five suggested that they would benefit from seminars and "workshops on targeted topics and

retreats on science education.” Three faculty members suggested that it would be helpful to have more funding for “graduate students who can work on projects with faculty, statistics support, helping in reviewing data.” Two faculty members thought they would benefit from feedback and class observation, which could provide “feedback on teaching from an impartial observer; instruction on developing exams that truly evaluate student understanding of material.” Two faculty members felt that there needed to be more recognition of teaching by the university. Finally, seven faculty members reported that they either could not think of anything or no changes were necessary.

Discussion

In this study, we sought to investigate the perceived importance of skills for undergraduate science students as viewed by three different populations involved in undergraduate education (faculty, GTAs, and undergraduate students). We also explored the reported teaching approaches used by faculty and experienced by students to investigate the extent to which active-learning, student-centered methods were being incorporated into the undergraduate curriculum. The recent science education literature emphasizes the importance of using evidence based teaching practices, in which students are engaged in their learning process (e.g., Freeman et al., 2007; Injaian et al., 2011; Jenson & Lawson, 2011; Kitchen et al., 2003; Knight & Wood, 2005; Senkevitch et al., 2011; Udovic et al., 2002; Walker et al., 2008). The science education community has also recommended modeling science instruction after how practicing scientists work, think and communicate (e.g., Handelsman et al., 2007; White House Office of the Press Secretary, 2009; Wieman, 2007), which helps students develop their understanding of the dynamic nature of science and increases their scientific problem-solving abilities (DeBurman 2002; DiCarlo, 2006; Durning & Jenkins, 2005; Zamorski 2002). This approach places a heavy emphasis on collaboration, scientific communication, and the achievement of deep conceptual understanding rather than memorizing disconnected facts.

The literature has also broadly discussed the importance of faculty awareness of the value of using best practices before they could adopt these practices and use them in their classrooms (Martin & Balla, 1991; Prosser et al., 1994; Trigwell et al., 1994; Trigwell et al., 1999). Faculty who believe in the value and decide to adopt innovative, student-centered practices usually need a support system to create and sustain the change. In our study, it was encouraging to discover that most of our faculty agree on the importance of using active learning approaches.

However, we found that many continue to use traditional instruction such as extensive lecturing. From our experience, in many cases faculty are interested in implementing more effective pedagogical approaches, but they often lack the training and support to do so successfully (Marbach-Ad, Schaefer Ziemer, Thompson, & Orgler, 2013).

In summarizing the results we will refer to the three actions that are recommended by national calls (AAAS, 2010; AAMC-HHMI, 2009; AAU, 2011; National Academies, 2006; NRC, 2003; PCAST, 2012; Woodin et al., 2010) to promote critical thinking: (a) promoting conceptual understanding rather than memorization of isolated facts, (b) encouraging cooperative and collaborative learning, and (c) fostering an understanding of the nature of scientific research and its applicability to everyday life. We will discuss possible reasons for the gaps between the recommendation in the literature, faculty awareness of these goals, and their use of the relevant teaching approaches to achieve them.

Promoting Conceptual Understanding Rather than Memorization of Isolated Facts

In our study, all three populations placed a high value on conceptual understanding. This is in accord with national recommendations to promote students' conceptual understanding over rote memorization (Ebert-May, 2008; Mayer, 2002; Redish, 2003; Smith et al., 2008; Wieman 2007). However, the three populations differed in the importance they placed on memorizing basic facts. Students rated this skill as more important than GTAs or faculty. This corresponded with the prevalence of extensive lecturing in the classroom as reported by both students and faculty. The literature provides evidence that lecturing tends to affirm the value of memorizing facts (Biggs, 1999). We believe that because most students experience this frequently in the classroom, they tend to place great emphasis on this skill. As for faculty members, although they do not value memorization highly, they continue to use lecture extensively in the classroom, which reinforces the students' perception of the importance of memorization. Faculty reliance on lecturing could stem from their previous experiences as students (Anderson & Helms, 2001), lack of formal training in teaching (Adamson et al., 2003), large class sizes, pressure to cover increasing amounts of material in a limited amount of time, insufficient preparation time, fear of negative student reactions to active-learning approaches, and lack of confidence to implement new instructional approaches (Henderson, Dancy, & Niewiadomska-Bugaj, 2012; Wieman, 2007).

Interestingly, we found that there were disciplinary differences in terms of the importance placed on

memorization skills. In the chemical sciences, all three populations placed a higher importance on learning basic sets of lab skills and remembering formulas, structures, and procedures as compared to those in the biological sciences. This is congruent with the research of Hativa (1993), who found that scientific disciplines operate according to different sets of rules that might differentially affect instruction in these fields. This suggests that there may be differences among disciplines in faculty willingness to move away from lecture-based instruction.

Although almost all faculty reported that they relied extensively on lecturing, most of them also reported that they frequently answered student questions in the classroom, communicated course goals and objectives, asked students to interpret graphical information and engaged students in class discussions. The emphasis on communicating course goals may be attributable to our institution's recent reaccreditation process, which resulted in a campus-wide requirement for departments to report to a university committee regarding learning outcome assessments in relation to explicit learning goals.

Encouraging Cooperative and Collaborative Learning

Cooperative and collaborative learning is one of the foundations of active learning, and there is abundant evidence that working in groups enhances student learning at the pre-college (e.g., Johnson, Maruyama, Johnson, Nelson, & Skon, 1981; Slavin, 1983, 1990) and post-secondary (e.g., Cooper, 1989; Cooper, 1995; Ebert-May, Brewer, & Allred, 1997; Hake, 1998; Treisman, 1992) levels. Moreover, group work closely reflects the practice of science in both academia and industry and allows students to develop interpersonal skills essential for the workplace (Froyd, 2008; Wood, 2009). Students working in groups often achieve a synergy that enables their collective ideas to surpass those of any individual student working alone (Froyd, 2008).

In light of the widespread agreement regarding the importance of working in groups, it is surprising that only about half of the faculty and undergraduates we surveyed placed importance on working in groups for undergraduates. Moreover, only about half of faculty reported that they asked their students to work in groups, either in class or outside of class. We suspect that this disconnect between the actual and perceived value of group work stems from a variety of factors.

Group work can be impeded by the size and structure of the classroom (e.g., forward-facing, immovable seats), but SCALE-UP (i.e., student-centered active-learning environments for undergraduate programs) rooms that are specifically designed to allow

group work are becoming more prevalent. There are also cases of successful implementation of group work in traditional, lecture-style classrooms with enrollments up to 200-250 students. For example, Sokolove and Marbach-Ad (1999) found that students in a high enrollment introductory biology class who reported studying with classmates earned better test scores. They further showed that using cooperative learning methods in the classroom can significantly impact out-of-class student study behavior; students enrolled in an introductory biology class that made frequent use of cooperative, active learning activities were more likely to study together outside the classroom than students taught in a traditional lecture-style class.

Students often express frustration that they need to work harder to compensate for group members who are not putting in the required effort. Group work often is assessed as a whole, with each student in the group receiving the same grade. This makes it difficult for faculty to give adequate credit to those who made the largest contributions to the final product. Group assignments also need to be carefully constructed so that the efforts of all group members are necessary to successfully complete the assignment, and there need to be mechanisms for holding each group member accountable for their contributions (Froyd, 2008).

Encouragingly, in this study we found strong correlations between the faculty's belief about the importance of working in groups and the use of group work as an instructional technique. Those who believed that this skill was important (about half of the faculty) also used this approach more frequently in their classrooms. This provides hope that increasing faculty awareness of the benefits of group work, along with the increasing use of technology to foster collaboration and the advent of large lecture rooms that allow students to assemble into groups, will result in an increase in the prevalence of group work as a teaching strategy.

Fostering an Understanding of the Nature of Scientific Research and Its Applicability to Everyday Life

Recent national recommendations stress the importance of approaching scientific education with the same rigor as scientific research and using examples from everyday life and scientific research in their teaching (AAAS, 2010; Handelsman et al., 2007). There are many ways of accomplishing this, including the use of case studies (e.g., CASES Online, 2014; Herreid, 2005; National Center for Case Study Teaching in Science, 2014), problem-based learning (e.g., Allen & Tanner, 2003; University of Delaware, 2014), and course-embedded scientific reading and writing (e.g., Ebert-May & Hodder, 2008; Mulnix, 2003; Parent, Marbach-Ad, Swanson, & Smith, 2010).

We were encouraged to find that the large majority of faculty and graduate students placed a high level of importance on scientific writing, understanding the dynamic nature of science, and understanding how science applies to everyday life.

We found a gap, however, between faculty beliefs about the importance of undergraduates acquiring scientific writing skills and the faculty's use of scientific writing in undergraduate courses. Although faculty reported that they valued scientific writing, only about one-third reported that they gave assignments that involved writing. Marbach-Ad and Arviv-Elyashiv (2005) found that biology faculty agreed on the importance of undergraduates acquiring scientific writing skills; however, faculty disagreed about whether scientific writing should be taught in special courses through the English department or incorporated into assignments in science courses. Other studies have found that a lack of human resources to read and provide feedback on students' writing assignments deters faculty from incorporating scientific writing assignments in their courses (Marbach-Ad et al., 2013).

Most faculty members felt it important to relate course material to everyday life and to scientific research. In terms of teaching approaches, a large majority of faculty reported that they used real-life problems and asked students to interpret graphical information at least a few times per semester. The high percentages of both beliefs and reported use of these teaching approaches may be due to the growing availability of libraries of case studies

The Role of FLCs in Assisting Faculty to Adopt Evidence-Based Teaching Approaches

Successful implementation and institutionalization of active learning teaching techniques in higher education requires comprehensive, ongoing support for faculty that must be situated in the broader context of institutional and departmental cultural change (Wieman, 2007). It is naïve to expect that isolated professional development experiences will result in lasting change without continued reinforcement and peer support (Ebert-May et al., 2011). This support can take the form of mentoring and feedback from expert teachers (Ebert-May et al., 2011; Henderson, Beach, & Famiano, 2009) or participating in a community of practice (Rogan, 2007). When we looked at the faculty's reported use of an array of teaching approaches, we found differences between faculty who belonged to FLCs and those who did not, which we believe are connected to the FLCs' activities. Faculty who belonged to a FLC reported using student-centered teaching approaches more frequently than faculty who did not belong to a community. Silverthorn et al. (2006) also found that faculty members who participate in FLC

change their teaching approaches by including more classroom activities, using more assessments, and reconfiguring their teaching content. These changes in teaching translate into greater student engagement, more opportunities for students to reflect and self-assess their learning, more opportunities for students to integrate information, more positive student evaluations, and a better classroom environment (Cox, 2004; Silverthorn et al., 2006). In our study, for example, we found that faculty who participated in communities reported using group work in and outside of the classroom significantly more often than those who were not in a community. Communities are themselves a type of group, and therefore it makes sense that faculty who benefit from participating communities recognize the potential importance of group work for students.

Recommendations for Change

We believe that in order to further assist faculty members, it is necessary to provide them with professional development opportunities, moral support from peers, and instructional support from science education and instructional technology specialists. Here we suggest broad recommendations for professional development activities and describe how we made use of the survey results at our College of Chemical and Life Sciences.

To enhance professional development opportunities for faculty and graduate students, our College of Chemical and Life Sciences initiated a disciplinary Teaching and Learning Center that develops activities based on survey data and informal conversations with faculty and graduate students. Programming includes teaching and learning workshops that focus on topics relevant to STEM education. For example, the TLC runs a visiting teacher/scholar seminar series that highlights scientists who are nationally recognized for their ability to integrate teaching and research. Visiting teacher/scholars spend 2 days on our campus sharing their ideas and meeting with small groups of faculty for informal discussion. We feel that this dual emphasis on teaching and scientific research provides a model for how faculty at large research universities can engage in scholarly teaching.

Another way of enhancing professional development is through faculty learning communities that meet regularly to discuss teaching and learning initiatives. These communities facilitate productive collaborations between lecturers (who have primarily instructional responsibilities) and tenure-track faculty (who have both research and instructional responsibilities). They also provide opportunities for experienced instructors to mentor novice instructors. The teamwork that develops within communities also helps faculty to save time in developing teaching

materials and exploring the use of innovative pedagogies, as well as making it easier for them to get grant support for these initiatives. The TLC is also trying to involve graduate students in the communities so that they will have more opportunities for professional development in teaching and learning. To better prepare future faculty members, the college invests in graduate teaching assistant training. All new graduate students are required to participate in a prep course for science teaching, and a more extensive program exists for graduate students who are interested in teaching and learning for their career.

The Teaching and Learning Center is working closely with department chairs and faculty to develop a peer review evaluation framework for all faculty in the department. Peer review, which is usually used only for summative purposes (e.g., merit and promotion), can also be used to create a regular feedback process in which all faculty members are observed and participate as observers for other faculty.

This study provides a unique contribution to the science education literature since it captures the perspectives of the three populations involved in undergraduate science education in our college: undergraduates, GTAs, and faculty. The findings from this study, and the professional development activities inspired by it, can serve as a model for other universities and colleges by indicating what is missing from undergraduate science education and highlighting fruitful avenues for professional development in teaching and learning.

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- Genetics." Over the past 15 years, she has been involved in numerous aspects of science education research and implementation, including the development of study tools (e.g., science curricula, learning materials, computer software) and training courses for pre- and in-service teachers. From 1998-2000 she carried out postdoctoral research in undergraduate science education at the University of Maryland Baltimore County, funded by a National Science Foundation (NSF) grant. From 2000-2006, Dr. Marbach-Ad was a faculty member, head of the Life-Science Education Department with a tenured position at the department of Science Education at Tel-Aviv University. Currently, Dr. Marbach-Ad is the Director of the College of Computer, Mathematical and Natural Sciences, Teaching and Learning Center, at the University of Maryland (UMD). She is also a research associate professor at the department of Curriculum and Instruction in UMD.
- KATHRYN SCHAEFER ZIEMER is a doctoral candidate in counseling psychology at the University of Maryland, College Park. She worked as a graduate assistant to the Director of the Teaching and Learning Center in the College of Computer, Mathematical and Natural Sciences at the University of Maryland for 2 years. She is currently completing her pre-doctoral psychology internship at the DC Veterans Affairs Medical Center.
- MICHAL ORGLER is the Deputy Director of the Psychological Services of the city of Tel Aviv-Jaffa—Israel's largest municipality. Appointed in 2012, she is a member of the senior management team at Tel Aviv City Hall, providing professional guidance and leadership for the city's 170 psychologists. Dr. Orgler received her PhD in Educational Psychology in 2003 from Tel Aviv University for her dissertation on "Information Seeking Coping Style: Its Functions in Coping With Stressful Situations Varying in Perceived Threat and Control." In addition to her capacity as an educational psychologist working with the Tel Aviv public school system since 1995, Dr. Orgler has been involved in many public-private ventures providing enhanced psychological care for children. She is a sought-after lecturer and taught, among others, at Tel Aviv University and Tel Aviv College. Between 2009 and 2011, she was a consultant for the Teaching and Learning Center in the College of Computer Mathematical and Natural Sciences at the University of Maryland (UMD).
- KATERINA (KACI) V. THOMPSON is Director of Undergraduate Research and Internship Programs in the College of Computer, Mathematical, and Natural Sciences at the University of Maryland. She holds BS and MS degrees in Biology from Virginia Tech and a PhD in Zoology from the University of Maryland. In

GILI MARBACH-AD received a PhD in Science Education in 1997 from Tel Aviv University for her dissertation on the subject of "Students' Conceptions in

addition to facilitating student involvement in co-curricular experiences, she coordinates externally funded curriculum development initiatives in the biological sciences and oversees the CMNS Teaching and Learning Center, which provides professional development opportunities for science faculty and graduate students.

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Online Peer Observation: An Exploration of a Cross-Discipline Observation Project

Margaret Nicolson and Felicity Harper
Open University

In this article the authors compare two phases of an ongoing, annual online peer observation project at the Open University. Adopting a non-managerialist approach, the project aims to give teachers a renewed sense of collegiality, allowing them to take responsibility for aspects of their professional development and share practice points. While the first phase focused on a single discipline group in languages, the second brought together teachers in languages with teachers of Math, Computing, and Technology, all employing Elluminate Live as their online teaching platform. The authors comment on congruent and divergent gains emerging from the two phases.

With the increase in online teaching via virtual classrooms, teachers are expected to embrace new ways of teaching and pedagogic approaches appropriate for the context. Since 2005, and as part of the blended teaching model in operation for Open University (OU) language delivery, OU language teachers have had to engage with online classrooms using Elluminate for synchronous teaching sessions. Elluminate classrooms are audio-graphic and offer participants the opportunity to speak, use a whiteboard and textchat, and work in a main room or in breakout rooms.

The project, the outcomes of which this article examines, was originally set up because, as staff developers and managers of language teachers, we shared concerns that some teachers in our teams were displaying a more authoritarian, more guarded teaching persona and less creativity in their practice in these online classrooms than in their face-to-face teaching. We wanted teachers to regain confidence and creativity in the online environment, both for their own professional sense of worth and to enhance the student experience, and to do this via a practice-based, peer approach. The enthusiastic response to the project resulted in us making this an ongoing offering in staff development, and we are now into the fifth year.

Here we examine the first two phases of the project. The first phase (2009 and 2010) involved OU languages teachers across a variety of seven languages and four course levels. In the second phase (2011), OU languages teachers from those languages and levels worked with OU Math, Computing, and Technology (MCT) teachers who also used Elluminate to deliver teaching on six modules spanning two levels. We discuss the extent to which there was congruence or divergence in the gains expressed by participants in the languages-only phase of the project and the cross-faculty phase, and we consider the benefits to teachers participating in the respective strands. As our language teachers were at a different stage of development in each of the two phases of the project, we do not seek to make a direct comparison between the two strands, but

rather to explore potential explanations for congruence and divergence and to consider the respective value of subject-only and cross-subject peer observation endeavors.

Research Influences

There exists a body of research work around peer observation projects, mostly from the 2000s, from which we have drawn ideas for our project. The project's focus on teaching sessions, its non-judgmental ethos, dialogue model and reliance on trust, collaboration and reflection aligns with Gosling's (2002) Peer Review model for peer observation, and also the ethos of peer observation projects reported by Byrne, Brown, and Challen (2010), Donnelly (2007), Schuck, Aubusson, and Buchanan (2008), and Shortland (2010). We also align with Bennett and Barp's (2008) view that projects of this kind work best when independent of any quality assurance process. In adopting the role of project enablers with an ensuing "hands-off" approach we were able to prevent any blurring of roles that our usual managerial position might have suggested to participants. Swinglehurst, Russell, and Greenhalgh (2008) noted that participants in their project felt that previous peer observation had failed to support them in their professional development, because it existed "either explicitly or implicitly within a framework of 'teaching as performance evaluation,' bringing with it an inevitable sense of judgment and accountability" (p. 386). We neither participated in observations nor saw the individual outcomes of them.

We acknowledge the importance of reflection (Schön, 1987) in this project, and agree with Johnson (2006) that it is when the professional development involves the site of practice along with teacher reflection that most meaningful change is brought about. However, we also acknowledge Kumaravadivelu's (1994, 2003, 2006) call for teachers to move beyond that of Schön's (1983) reflective

practitioner towards Giroux's (1988) concept of the transformative intellectual. This is necessary in the new and sometimes daunting online teaching world, where new teacher roles and new understandings of those roles are required (Gallardo, Heiser, & Nicolson, 2011). The concept of reflection via conversation is also important, for as Haigh (2005) noted, "both spontaneous, totally undirected conversations and 'guided' conversations can be productive contexts for professional learning" (p. 14). The origins of this project, as well as its framework, have relied on conversations as a key motivator.

Boud and Brew (2012) suggested that "practice development starts with a concern for the nature of a specific practice" (p. 8). Our own understanding of "practice" is as the overall professional armory drawn on to enact the activity, in this case teaching in a synchronous online environment. In this, we draw on Schatzki's (2001) summaries of what practice is: "skills, tacit knowledge and pre-suppositions, that underpin activities" or "arrays of human activity" (p. 2). In believing that practice relies on a spectrum of creative yet practicable ideas and principles examined and prioritized by the professional, we are influenced by Kumaravadivelu's (1994, 2003, 2006) writings on the post-method condition, particularity, and principled pragmatism, where the teacher assesses the needs of the particular group and context and acts accordingly in the planning, implementation and review stages.

As we adopt a social-constructivist approach, more broadly in line with Vygotsky's belief that learning is situated in a socio-cultural framework, we recognize the situated nature of professional development (Eraut, 2003; Lave & Wenger, 1991) in that the effect of context, social interaction and dynamics are key in explaining outcomes. In examining the compelling link between such professional development and the practice domain, we have been influenced by the practice turn which, as Boud and Brew suggested (2012), "[conceptualizes] phenomena as connected, located and grounded in the practice of particular events and activities" (p. 5). Development within the site of practice based on true peer work avoids sole reliance on top-down theoretical domains. It also allows the replacement, as Gosling (2002) advocated, of the previous single roles of "giver" and "receiver," as protagonists will assume both roles both when observing and being observed.

Wenger's (1998) idea of the community of practice is crucial to the project, as a key aim is to encourage the formation of a new community for the duration of the project phase at least, if not for longer, where practice knowledge can be shared by professionals coming together via their practice setting in a structured way. However, in line with our view of practice, we endorse a community of practice notion that does not constrict,

either by suggesting that there is a single view of practice which involves slavish adherence to a methodology or the enactment of a rigid set of beliefs about teaching and learning (Guangwei, 2002; Howard, 1996; Nicolson & Adams, 2008, 2010). We also accept, in line with Turner (2001), that individuals will have different starting points for learning and will "acquire what they learn through different sets of experience and . . . satisfice according to different goals which may change over time and thus direct the path of experiences and learning in different ways" (p. 129).

Project Framework, Ethics, and Method

In the OU context, part-time teaching staff opt voluntarily into staff development opportunities outside contract time and depending on need and availability. In our project, participants received a token sum to acknowledge time involved in the online observations and discussions during the year as well as a final team review meeting. One volunteer from each team acted as team leader and received an additional sum. We provided initial information and guidance, after which participants managed the process themselves. There were four stages involved: (1) Familiarization with the aims and objectives, which were to:

- develop professionally in a peer environment without line-manager intervention;
- create new teacher communities across geographical boundaries;
- share practice in online teaching environments;
- openly discuss issues from the peer observation process in a confidential, supportive forum; and
- familiarization with the protocols of working as a "critical friend/learning friend."

(2) Observations and reflective discussions, with participants involved in:

- a preparatory team meeting led by the team leader to organize observation times and discuss approaches to the project;
- a minimum of three observations (i.e., observe three other teachers once);
- peer observation in a supportive spirit; and
- constructive feedback after each observation, leading into a confidential reflective discussion.

(3) A full-team discussion to reflect on the project experience, with a written report of the meeting from the team leader for the researchers. Finally, (4)

Individual participant feedback questionnaires sent directly to the researchers.

In the languages-only phase, which ran for two consecutive years, 23 OU language teachers participated; three of them participated twice. In the cross-faculty phase, which ran for 1 year only, 16 OU teachers participated, nine from MCT and seven from Languages, of whom six language participants had taken part in one or both years of the earlier phase. In both phases, participants were divided into teams. Following feedback from the first year which had highlighted difficulties in arranging observations in the small teams of four we had convened, in the two subsequent years participants were divided into teams of eight.

The data for the first phase consisted of the qualitative feedback provided by participants in the individual questionnaires and the reports provided by the team leaders of the final team meeting. In the cross-faculty phase, these tools were supplemented by a 5-minute recording by the four language teachers who had taken part in both project phases in which they described and compared their experience of the language-focused and the cross-faculty phase.

Evaluation of the Outcomes of the Two Phases

In analyzing the data from the two phases, it became clear that there were both points of congruence and of divergence between phases. These points related to gains identified with regard to the stated aims and objectives, and to outcomes associated with our own aims to enhance the teachers' ability to self-develop. They are discussed separately in the two sections below.

Sites of Comparison in Gains

In the first phase of the project, we identified the following areas of gain against which we compared the outcomes of the second phase: (a) gains in self-confidence and self-belief in teaching, (b) gains in belonging, (c) gains in reflection and widening perspectives, and (d) gains in practice aspirations.

Gains in self-confidence and self-belief in teaching. In the initial languages-focused phase, there was evidence that teachers struggled with challenges around the new online environment. Participants talked of difficulties, of feelings of isolation and concerns with the teaching tool, and of their need to seek reassurance from the project to feel that they were capable of doing their job. They reported fear of the technology failing and fear of being perceived by students as incapable, both of which appeared to be linked to their self-perception. As a consequence of the project, however, they reported recognition of the fact that being

perceived by students as infallible is not fundamental for being considered a good teacher. In the subsequent cross-faculty phase, in contrast, all participants appeared to believe from the outset in their ability (ultimately) to use Elluminate successfully. Their focus was squarely on seeking confirmation of competence and improving online teaching by trying out ideas observed or suggested to them in observations of their own practice, and they reported enhancement of self-belief and confidence in their ability to function effectively in the online environment. Three participants cited that they had gained respectively: "reassurance that what I do is generally similar," "confidence in my use of Elluminate," and "more confidence in my own work."

For language teachers this difference in the attitude across the two phases may be attributable to the fact that, in the first phase, they were newer to the online environment and so had less confidence in their ability to function effectively online, to withstand problems with the tool or to successfully transfer and adapt face-to-face practice to the online environment. In contrast, by the time of the cross-faculty phase, they had already had at least 1 year's experience in teaching in Elluminate and had benefitted from the reassurance that participation in the languages-focused phase of peer observation had given them.

Gains in belonging. Gains in belonging were more marked in the languages-only phase than in the cross-faculty phase. In the initial languages-focused phase, the need for team-building and overcoming feelings of isolation was evident, as was appreciation of the benefits of seeing how their module fitted in to the wider language offering. In the cross-faculty phase, on the other hand, there was focus on the value of belonging to the team rather than on fitting into the bigger picture of course provision across the university. Participants found the interaction with colleagues from the same and other faculties useful, and they mentioned the supportive ethos. One participant noted, "The group was motivated and we were very encouraging with each other. That meant it was a pleasure to have an observer we were trusting." Another said she "got to know a number of nice colleagues rather better." Only one teacher mentioned the benefit of seeing their subject area as part of a wider university offering and a wider pattern of online teaching: "Good to see more of what the OU offers, I only really thought in terms of Languages as [having] virtual/online courses before." Perhaps the short-term nature of the community of practice formed in the cross-faculty phase was uppermost in participants' minds, knowing they would be unlikely to interact after the project.

Gains in reflection and widening perspectives. In both phases, participants found that viewing the session from the students' perspective increased empathy with

students. In the language-focused phase, one participant recognized the ease with which a teacher can upset, misunderstand or confuse students. In the cross-faculty phase, teachers did not have moderator status in the Elluminate rooms of the other faculty so saw the session exactly as a student sees it. One teacher, therefore, discovered that his students may not be seeing on the screen what he thinks he is showing them. One of the team meetings reported that this phase had inspired them to record and watch their own sessions in order to improve their own self-awareness.

In both phases, again, being able to observe creative use of the software enabled participants to reflect on their own use of technology, but the differences were more marked in the cross-faculty phase. Here, for example, MCT colleagues noted that Languages teachers made more use of the breakout rooms and had more interactivity in their sessions, while Languages teachers discovered that MCT teachers used applets and programs. Each group aspired to incorporate the other group's practices in their own teaching, which perhaps demonstrates that although the community of practice was shorter-lived, there were long-term practice benefits.

In the languages-focused phase, and as observers, participants commented on the value of comparing and contrasting teaching approaches around subject-specific pedagogic issues, such as the ways other tutors taught pronunciation and corrected (or did not correct) errors, and how teachers used slides to provide prompts for productive language. In addition, the languages-only phase encouraged teachers to explore their response to observing a teacher of the same module handling the same session differently, which allowed them to reflect on the reasons behind a choice of approach and its relative merits in context.

While the languages-focused phase offered this depth of analysis of subject-specific pedagogy, the cross-faculty approach appeared to offer a greater opportunity for observers in terms of widening perspectives. Participants clearly enjoyed and benefited from the wide range of teaching approaches, calling for more faculties to be involved in future projects. Comments included: "It was good to see how another subject worked"; "It was really interesting, a real eye-opener"; and, "Very good to see different ways of using Elluminate, different ways of interacting with the students, and also good to observe so that you can reflect on how it impacts on the students." There was a belief among participants that the differing approaches were dictated to an extent by the nature of the subject matter: "[It was useful] to note how we vary according to type of student and subject matter"; and,

[It was] useful to see how different the teaching materials are, not only because of the personality of

the teacher but also because of the different teaching subjects; and also to see the range of students and how they differ.

In terms of being observed and the subsequent discussion, in the language-focused phase, participants welcomed the fact that "different observers have a different focus of interest," and they found it "enriching to hear a variety of impressions." In the cross-faculty phase, one teacher commented on how interesting it was when two different observers made the same comment, which she subsequently successfully acted upon. A similar comment was made in both phases that teaching "as though you are being observed" makes for a better session. Approaches to feedback varied in both phases, and this variety was equally welcomed. There was some indication of a deeper focus on discussion of pedagogy in the language-focused phase as compared to the more wide-ranging discussions of the cross-faculty phase, incorporating, as one participant noted, "Elluminate functions, classroom management, teacher-led versus collaborative learning, face-to-face versus online tutorial preparation, [and] material design."

Overall, while the cross-faculty phase provided breadth, the languages-specific phase offered language teachers more opportunity for reflection on deeper pedagogical issues in language teaching, for example "planning and grading activities so [as to] increase students' confidence in speaking" and a need to "design specific pronunciation activities." Although discussions could be wide-ranging in the cross-faculty phase, the focus was more on practical aspects of online tutoring and general issues around session delivery: "The discussion of pedagogy was secondary to these technical issues"; and,

Since feedback [in the cross-faculty stage] was in general about the handling of the tools in Elluminate, [about] the interactions between the teacher and the learner group, and about the use of the whiteboard, the language was no problem at all.

Gains in practice aspirations. Increased awareness of the student experience together with observation of different approaches caused participants in both phases to identify issues for consideration in teaching. In the languages-focused phase, teachers honed in on language-specific considerations such as revising how they configure student groups, realizing the importance of silences and using the textchat for unobtrusive prompts or corrections, as well as more generic concerns such as increasing interactivity and use of breakout rooms and attending to sequencing of activities and pacing. Teachers were also keen to explore how to integrate pre and post-lesson materials. In the cross-faculty phase, intentions differed by

faculty, with most changes being the result of aspects observed in the other faculty. Language teachers were again concerned with integrating materials from outside the session, and they also aimed to improve the range of slide design, improve the balance between knowledge revision and practice exercises and increase the use of pointers and smileys. MCT teachers, on the other hand, were concerned to increase interaction instead of delivering mini-lectures, to make more use of breakout rooms, and to keep the student rather than the teaching platform (i.e., Elluminate) at the center of the session.

The fact that language teachers in the cross-faculty phase did not mention interaction and increased use of breakout rooms suggests they had by then become skilled at this. However, an alternative explanation is that among the participating language teachers there was no one who offered anything new around this whom colleagues wished to emulate, while for the MCT teachers, used to delivering mini-lectures, any model of increased interaction provided useful modeling.

Discussion of the Respective Values of Cross-Faculty and Languages-Specific Phases in Enhancing Teachers' Ability to Self-Develop

In terms of value gained in self-development in the respective phases, four key themes emerged: (a) the development of confidence in their ability to observe others, (b) the ability to challenge concepts of good practice, (c) the willingness to integrate new approaches into their practice, and (d) their awareness of their own self-development trajectory.

First is the issue of confidence. Teachers gained confidence in observation in both phases, both in reflecting on a session and in considering the underlying pedagogy, which allowed them to move beyond reflection to abstraction and on to reframing and applying in their own context. In the languages-only phase, teachers recognized that they could move from observing in the comfort zone of their own languages to observing effectively across languages with which they were unfamiliar: "When I observed a tutorial in a language I wasn't familiar with, I found I concentrated more on the layout and frame of the tutorial which was quite useful." This is not surprising, as within an institutional framework where expectations around what happens in a languages tutorial are prevalent, then certain conventions will be followed, irrespective of the language in question. In the cross-faculty phase, participants also recognized their ability to consider teaching approaches in completely unfamiliar subject areas. A languages teacher in this phase commented: "It was interesting to see that even if I don't understand much about a subject, I can still focus on the teaching and the method." Similarly,

participants realized that they could contribute to the development of others from a different background: "[It was] comforting as well when the 'friend' said they would try something new with their own group, whereas they would have had no idea how to do it before." Thus, the cross-faculty approach appeared to offer participants a further level of awareness of their capabilities as reflective practitioners. All of this can be considered a further developmental stage in critical reflection on approaches to methods and student support.

Secondly, in both phases, teachers developed their ability to challenge concepts of good practice within their own subject, precisely because of the practice context, as Boud and Brew (2012) advocated, rather than from a theoretical backdrop. They were able to theorize their practice, which in turn aids reflection and impacts on their own teaching. In the languages-focused phase, this challenge came from seeing other teachers successfully use approaches new to the observer or going against concepts of accepted wisdom. This enabled participants to recognize the importance of particularity (Kumaravadivelu, 1994, 2003, 2006), and to question their underlying assumptions and practice behaviors. As one participant stated, "I reflected on how we are always trying to improve methodology and how I might be using a mix of groupings for its own sake rather than staying with one pairing method that suits an individual group." In the cross-faculty phase, this was taken a stage further, as teachers came to recognize that, contrary to their initial perceptions that different subjects necessitated different approaches, there were novel features from other discipline areas that could be incorporated into their own teaching. This phase therefore extended horizons further and provided a higher level of challenge to assumptions of what is permissible and possible within teaching. Yero (2010) suggested that practice can become habitual: "Teachers' behaviours frequently spring not from higher level thinking processes but from habit" (p. 7). Habitual action is sometimes easier, requiring less effort than re-interrogating the way we do things. However, it may also spring from other things: an inward-looking pedagogy within the subject area itself, staff development restricted to the discipline rather than drawing on other subjects, and/or a lack of confidence among some teachers in critically engaging with the methodologies which have infused their training, where this training has appeared to be top-down. All of this can lead to constraints around what teachers feel able to do and a lack of confidence in trying new methods. For example, Communicative Language Teaching, as Savignon (2006) clarified, has been interpreted inappropriately as the need for pair and group work, a focus on oral work and, in some cases, a rejection of "metalinguistic awareness or knowledge of

rules of syntax, discourse, and social appropriateness" (p. 213), such that practicing language teachers endeavor to follow requirements that do not exist in the underpinning theory. Encouraging teachers to question the pre-suppositions and notions that underlie their practice contributes considerably to their development by asking them to step outside the familiar confines of tried and trusted methods. Participants' willingness to try to incorporate techniques observed in different subject areas suggest that participants recognized that although practice may be initially influenced by the type of student and subject matter, this may be more a result of norms within the subject-teaching methodology than the existence of intrinsic limitations of appropriate methods. This suggests that participants have moved towards Schön's (1983) reflective practitioner stance and added to their armory of professional strategies.

Thirdly, in both phases, participants expressed willingness to integrate new approaches observed into their teaching, requiring the ability to conceptualize how to do this and a desire to take risks. Techniques observed in similar situations can be fairly easily transferred and attempted with some confidence, but borrowing from another subject area may require even more insight and creativity. Both allow teachers to experiment with the construction of method paradigms within their subject area. Recognizing one's ability to devise new approaches to subject teaching can create a greater sense of individual responsibility and may also serve to transform a teacher from recipient of a teaching methodology to contributor to the body of knowledge that informs concepts of good practice. Realizing that one has the ability to notice the underlying pedagogy in an unfamiliar subject, to reflect on its relevance to that subject and then to integrate it into one's own teaching may then be said to show a higher level of self-development than doing so within a familiar subject area. This suggests that the second phase of the project achieved the aim of extending horizons further and developing greater creativity among participants.

Finally, teachers demonstrated a greater awareness through project participation of their own self-development trajectory. As one stated: "I feel like undertaking some self-observation, as I am not happy with some aspects of my teaching." One of the teams went as far as to present self-development objectives for themselves:

- to participate in more staff development sessions on Elluminate,
- to keep on training,
- to keep on participating in Peer Observation Projects,
- to record own tutorials to observe ourselves for self-awareness during the teaching process,

- personal improvement of IT skills, [and]
- to use more the breakout rooms.

Value of Subject Versus Cross-Faculty Observation

In ascertaining whether a subject-specific or cross-faculty model has more value, both in developing practice and in enhancing teachers' ability to self-develop, consideration needs to be given to the aims of the project and how these relate to the needs of the cohort of teachers. These are given in Table 1.

To a certain extent, the choice of approach will depend on the stage of development of teachers involved. Where teachers are new to the online environment and lack the confidence and the skill to use a wide range of strategies generally associated with their subject, there is an argument that a subject-specific approach provides the best environment to develop skills. Here skill development may be presented with less challenge, and it may be easier to discern what can be transferred to participants' own teaching. They will observe others experiencing success in a similar context and be able to share difficulties and frustrations. Discussions are likely to focus more on subject-specific issues, such as the best way to group students, how to sequence activities, and, in languages, how to ensure the right level of student participation for each individual, given the difficulties that speaking and understanding another language can present in addition to the new online environment. Conversations between subject specialists are likely to be grounded in a shared understanding of what they seek to achieve. This then allows increased creativity within the new environment and deeper engagement with subject teaching pedagogy per se. Much, of course, will be dependent on the nature of the observations. In some cases, teachers may be exposed to a limited repertoire of approaches that mimic their own, which, while potentially boosting confidence, do not simultaneously challenge practice. However, for those lacking confidence, even such confirmation of practice may provide a useful stage in development.

While a cross-faculty approach is unlikely to offer teachers the opportunity to engage in in-depth discussion around subject-specific pedagogical issues, it is probable that it will expose teachers to ideas about what might be possible beyond the strictures of learned and accepted teacher behaviors and practice. It can allow teachers more freedom to experiment, although this requires the inclusion of subjects that use a different approach. In our case, Math, Computing, and Technology teachers adopted a different delivery style from language teachers, centered around presentations and the use of different Elluminate features. Thus, a cross-faculty phase might be deemed more appropriate

Table 1
Value of Subject vs. Cross-Faculty Observation

Aim	Languages-only phase	Cross-faculty phase
To develop professionally in a peer environment without line-manager intervention	<ul style="list-style-type: none"> • Recognition of ability to <ul style="list-style-type: none"> ◦ self-develop and use peer observation as means to this; ◦ reflect on own and others' pedagogy in familiar contexts. 	<ul style="list-style-type: none"> • Recognition of ability to <ul style="list-style-type: none"> ◦ self-develop and use peer observation as means to this; ◦ reflect on own and others' pedagogy in familiar and different contexts.
To create new teacher communities across geographical boundaries	<ul style="list-style-type: none"> • For the duration of the project and beyond. • Benefits also of seeing how one fits into the curriculum offer of languages. 	<ul style="list-style-type: none"> • For the duration of the project; communities are unlikely to persist beyond. • Some benefit from recognition of what the institution offers and how one fits into it.
To share practice in online teaching environments	<ul style="list-style-type: none"> • Ability to transfer ideas from observations to own teaching • Related to language-teaching pedagogy; deeper reflection on language teaching in Elluminate and language-teaching approaches per se. 	<ul style="list-style-type: none"> • Ability to transfer ideas from observations to own teaching. • Related to technical issues and use of tools; consideration of style of session—interaction versus presentation.
To discuss openly issues from the peer observation process in a confidential, supportive forum	<ul style="list-style-type: none"> • Teachers welcome feedback and suggestions. • Teachers able to confront pre-conceived ideas about language-teaching "good practice." 	<ul style="list-style-type: none"> • Teachers welcome feedback and suggestions. • Issue about impact of level of subject-knowledge on the depth of discussion related to the success of the session and the feedback that can be provided.

to teachers who are already confident with teaching their subject in Elluminate but also used to experimenting with ideas.

Conclusion

Our research has shown, then, that both cross-faculty and subject-specific peer observation have merit, offering congruent and divergent benefits. Participants who took part in both phases valued them equally. Peer observation is certainly a useful ongoing development tool, and participants expressed the wish that it become embedded practice: "Peer observation could be a standing arrangement, if there were an easy way of finding like-minded lecturers, not just as part of a project"; and, "I think the OU should explore how peer observation could become the norm." Teachers could engage in different types of peer observation projects at different times, thus deriving the full range of benefits gradually over a period of time by being part of a dynamic community of practice. In our project, language teachers opted to participate in various phases, which, to an extent, allowed for such development. The choice some teachers made to participate twice in a languages-only model, others to do so in both formats, and others to participate only in one or the other

suggests that the teachers were selecting what they felt appropriate. The question for developers is what degree of choice to offer teachers, given that there may sometimes be a tension between what developers believe teachers need and what the teachers themselves may choose. An outcome of our project is that we will be able to present potential benefits from each approach to teachers, so that they can select the version which most appeals.

In a model where teachers are encouraged to participate annually in peer observation, one structure might be to alternate subject-specific with a cross-faculty phase. Returning to a subject-specific phase would enable teachers to explore with specialist colleagues a more expansive approach to their practice armory in online teaching, adding strategies gleaned from observing other subject areas. As practice evolves over time in each subject area, the alternating cross-faculty phase will highlight new possibilities.

Being able to offer choice will depend on the nature of the institution and managerial expectations of peer observation. We are fortunate in working in an environment with a large teaching staff in each subject area, so it would be possible to offer two options simultaneously if desired or to alternate annually. An alternative to treating the phases separately, however,

might be to allow more time for completion of the observations, allowing participants the opportunity to observe five sessions, three from within their own subject area and two from elsewhere.

It is worth reiterating that our project ran alongside staff development opportunities on teaching in Elluminate for our languages teachers, which included sessions led by peer experts on technological and pedagogical issues. Also, participants continued to explore individual development needs with developers. An institution might choose to interweave such work with peer observation so teachers can try out ideas presented in staff development sessions or in their individual development program. It is, therefore, for the institution to decide whether and how to integrate other staff development needs into a peer observation project.

We have now rolled out our peer observation model to all languages teachers across our institution, UK-wide. This will enable us to establish whether the findings from these two phases are substantiated. We have also introduced a new trial strand where student feedback on the lesson is to be integrated into the observation loop. Future developments are likely to involve exploration of other online tools, such as forums, enabling teachers to experiment with ideas gained from staff development sessions. It is worth noting that our research into cross-faculty versus single-subject peer observation has explored this issue in relation to two faculties—Languages, and Math, Computing, and Technology. Other researchers might be interested in exploring the extent to which our findings can be generalized with regard to a different subject mix.

Our caveat to those contemplating such a program would be that peer observation cannot be a panacea for all developmental grumbles. It will only work as part of a fully-integrated, organic, dynamic, developmental structure which is fully accepted by all stakeholders.

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MARGARET NICOLSON is Senior Lecturer and Staff Tutor in Languages for the Open University in Scotland and writes extensively on language teaching. She is editor of the books *Language Teaching in Blended Contexts* and *Gaelic Medium Education* and is a fellow of the Higher Education Academy.

FELICITY HARPER is Senior Lecturer and Staff Tutor in Languages for the Open University in the South West of England. She is a contributor to the books *Language Teaching in Blended Contexts* and *Success with Languages*.

Student Perceptions on Live-Case Projects: Undergraduate Marketing Research

Raghava Rao Gundala

University of Wisconsin-Stout

Arthur Lok Jack Graduate School of Business, Trinidad and Tobago

Mandeep Singh

Western Illinois University

Andrew Baldwin

University of Wisconsin-Stout

This paper is an investigation into undergraduate students' perceptions on use of live projects as a teaching pedagogy in marketing research courses. Students in undergraduate marketing research courses from fall 2009 to spring 2013 completed an online questionnaire consisting of 17 items. The results suggested that student understanding of marketing research as a subject matter was significantly improved. The findings of this study are consistent with previous research, confirming the value of blending theory with practice. Specifically, this study found live-case projects were perceived by students to improve: (1) analytical skills, (2) understanding of subject matter, (3) critical thinking, (4) a comprehensive understanding of the research process; and (5) being engaged/active participants in class and in a more macro basis in their own education.

Live-case projects have gained increased interest in teaching marketing research courses during the past decade (Bove & Davies, 2009). This is because of the following reasons: (1) the gap between theory and application as realized by practitioners and academicians (Stern & Tseng, 2002), (2) more emphasis on theory than on practical applications (de los Santos & Jensen, 1985), and (3) lack of student preparation for marketing careers (Day, 1979; MacKay, 1979; Marshak & De Groot, 1978; Osthiemer, 1977; Peters, 1980). Employers seek professionals who have developed the ability to identify problems, seek relevant data/information, analyze and interpret data, make a decision and in, essence, solve real-world problems (Wilkins, 2000). Accrediting agencies suggest incorporating real-world learning experiences into business curricula. Further, educators are striving to bridge the gap between theory and practice by providing their students opportunities to apply the theoretical concepts to real-world business situations (Granitz, 2001; Kolb, 1984; Nofz, 1990; Schibrowsky & Peltier, 1995; Stern & Tseng, 2002).

Literature Review

Researchers have verified a significant gap between theory and application in marketing (Stern & Tseng, 2002). However, this gap between theory and application is not limited to marketing alone. It is also prevalent in other business disciplines such as accounting (Gribbin, Kames, & King, 1995), human resource management (Lewis & Ducharme, 1990), MIS (Ahmadi & Brabston, 1997) and production and operations management (Levenburg, 1996). Live-case projects can reduce this gap between theory and application (Humphreys, 1981; Lopez & Lee, 2005; Ramocki, 1987).

Experiential Learning

Kolb (1984) defined learning as a "process whereby knowledge is created through transformation of experience" (p. 41). Traditionally, academicians have relied on lectures to foster student learning (Kennedy, Lawton, & Walker, 2001). However, this teaching method is criticized for not stimulating the critical thinking and communication skills necessary for students to be successful in business on graduation (Munoz & Huser, 2008).

Keeton and Tate (1978) defined experiential learning as learning in which the learner is in direct touch with the studied realities. Past research has identified several critical ingredients needed for experiential learning, such as being interactive with the student community, company personnel and the faculty, as well as—most importantly—keeping contact with, and exposing students to, the real-world scenario (Gentry, 1990).

Experiential learning involves students with an experience and promotes reflecting on the experience (Frontczak & Kelley, 2000), whereas lecture-based classes promote passive learning (Kennedy et al., 2001) and leave students little time for reflection (Civi & Persinger, 2011). Experiential learning also helps foster critical thinking and problem-solving skills (Kennedy et al., 2001), and it positively impacts student learning (Warren, 2012). Researchers suggested using experiential learning in the marketing curriculum (Bridges, 1999; de los Santos & Jensen, 1985; Graeff, 1997; O'Hara & Shaffer, 1995; Wynd, 1989) and found experiential learning to increase levels of student involvement, understanding and information retention (Bridges, 1999; Drafke, Schoenbachler, & Gordon, 1996; Gruca, 2000; Hamer, 2000; Petkus, 2000; Specht, 1985). A more recent experiential learning technique is assigning live-case projects to students (Roth & Smith, 2009).

Live-Case Projects

Also known as client-initiated or client-sponsored projects, live-case projects need a business willing to work with students to undertake market research. The business introduces the project, supports the research and provides feedback on the results. Students present a report to the client on completion of research and make an oral presentation. Occasionally, the live-case projects become important for making marketing related decisions for the client organization as they provide a fresh perspective for the client organization (Browne, 1979; Jones, 1982; Richardson & Raveed, 1980).

Live-case projects provide the advantages of case studies with the significant benefits of being current, accessible and available for analysis in real-time. Live-case projects also give students an opportunity to apply the theoretical to a real-world client. Hamer (2000) found that experiential methods in marketing research, such as live-case projects, develop marketing and business skills in students. This method motivates students to learn because they are given an opportunity to interact with a real client and students quickly realize that their recommendations are no longer theoretical and that these recommendations need to be justified and well-conceived as there are real outcomes associated with the implementation of the same. Live-case projects also provide students with an opportunity for collaboration and teamwork. From the student vantage point, a live-case project is even more rewarding as it results in a tangible outcome and has the potential to make a positive contribution for a local business (Matulich, Papp, & Haytko, 2008).

For academicians, live-case projects come with many benefits. Burns (1990) pointed out that realism is the key ingredient in live-case projects. Richardson and Raveed (1980) and de los Santos and Jensen (1985) said that live-case projects provide a conduit between theory and practice. Live-case projects help students integrate material taught in the classroom and provide continuity (Gremier, Hoffman, Keaveney, & Wright, 2000; Humphreys, 1981; Razzouk, Seitz, & Rizkallah, 2003). Bridges (1999) suggested that incorporating live-case projects into the curriculum has the added advantage of providing consistency in the students' view about the discipline of marketing because these projects are interactive, real-world, and creative.

Purpose

Although there are multiple studies outlining the advantages of live-case projects, they are still not widely used in the classroom. Lopez and Lee (2005) pointed out the difficulty of finding good businesses with whom to work, grading challenges, and the necessary time commitment may be some of the

reasons for the general neglect in using live-case projects. This study considered these remarks, and it adds to the literature by outlining the method of implementation and feedback received for a series of live-case projects in an undergraduate marketing research course. This study is less concerned with the rationale surrounding the use of live-case projects, and instead it is focused on contributing to the literature that provides practical advice on carrying out live-case projects (Elam & Spotts, 2004; Lopez & Lee, 2005).

Granitz (2001) examined student perceptions of courses using an active project method approach to learning compared with those employing more passive techniques. Results showed that students thought active learning courses were more meaningful than courses using passive techniques. The purpose of this study is to further Granitz's (2001) findings and to seek undergraduate student's perceptions of live-case projects in a marketing research course taught in a small US Midwest state university.

Method

Participants

Participants in the study consisted of students who were enrolled in an undergraduate marketing research course during fall 2009 to spring 2013, totaling eight sections. The number of students who took the course over the 4 year period was 143. Forty-seven of these students responded to the request for participation in this study, resulting in a response rate of 32%. Marketing Research was a four number course and was open for students who were either juniors or seniors meeting the prerequisites of the course.

Course Structure

The eight marketing research course sections were taught by the same instructor. Each section had the same number and hours of class meetings, concept delivery (i.e., lecture and discussion), and course expectations on grading and assignments. On the first day of class, students were formed into groups of five or six students for a project that would encompass the entire semester.

Malhotra, Tashchian, and Jain (1989) outlined the operational issues when using a project method approach in a marketing research course. They are considered in developing the project. Specifically, during the months before the beginning of a semester, the instructor sought potential clients from local businesses. The instructor chose a client for each group. The instructor asked the clients to visit the class and discuss their marketing problem with the students.

As the semester progressed, students worked in groups through the various phases of the marketing

research. The project involved six distinct phases (Bove & Davies, 2009): (1) sourcing the client, (2) writing the research proposal, (3) designing the questionnaire, (4) collecting and analyzing data, (5) writing the research report, and (6) presenting the report to the client.

Each group's members conducted exploratory research and defined their marketing research problem. They became familiar with the use of secondary data and qualitative research. The course content provided them with information on potential research designs. In designing their research, groups used different methods. They collected data from their designed sample. The groups analyzed the data using SPSS or any other software according to their preference. After data analysis, the groups drew conclusions and analyzed the marketing implications from this analysis. The projects ended with formal presentations to classmates, instructor and client.

Measure and Procedure

A questionnaire was developed based on those used by Bobbitt, Inks, Kemp, and Mayo (2000) and Chapman and van Auken (2001) to examine students' project perceptions and learning. The questionnaire consisted of 17 items measuring students' perceptions. A sample item is, "My understanding of marketing research was enhanced." Each item was rated on a 5-point Likert scale (anchored by 5 = *strongly agree*, 1 = *strongly disagree*).

An e-mail invitation was sent to all the students to take part in the study by completing a survey within a set period of time. The e-mail explained that the purpose of this study was to seek their perceptions on live-case projects. Students were asked to express honest, anonymous responses as their input would be instrumental in deciding whether to continue to use this method in teaching marketing research. The survey was sent online using Qualtrics.

Results

Survey responses were mixed. Most students agreed or strongly agreed that their live-case project allowed them to gain firsthand experience of project execution and to use technical and analytical concepts and skills learned in class. Most students also said their understanding of marketing research, data collection, the needs of effective reporting of research results and the role of market research in business-decision making was improved. However, student responses were more evenly divided in response to the items, "My understanding of how to evaluate the tools necessary for gathering accurate information in an efficient, timely, and cost-effective manner was enhanced" and "This project gave me an opportunity to successfully convince a client organization of the worth of my

contribution to their organization." Overall, students agreed or strongly agreed they collected and analyzed data, and that their critical thinking skills were improved because of the live-case project.

Most students strongly agreed or agreed the live-case project was more productive and enjoyable than listening to a lecture and that it provided stronger motivation to work harder toward learning marketing research than a lecture. However, a subset of students did say their live-case project was not worth the effort and that it was less enjoyable compared to group projects in other business-related courses. Students' agreement was also mixed about their confidence in completing a similar project for a company in the future.

As the responses were mixed and the mean values are close to *neither agree nor disagree*, a *z* test was conducted to understand the lower and upper values for the Likert-scale responses. The *z* scores provided a greater understanding of the responses. The two items with the highest upper values were, "As a learning experience, this project was more productive than listening to a lecture" ($M = 4.33$), and, "As a learning experience, this project was more enjoyable than listening to a lecture" ($M = 4.31$). These results support the findings of earlier researchers (Bridges, 1999; Drafke et al., 1996; Gruca, 2000; Hamer, 2000; Petkus, 2000; Specht, 1985). The *z* scores of "I gained firsthand experience of project execution, including data collection" ($M = 4.11$), "My understanding of the data collection process was enhanced" ($M = 4.03$), and "My understanding of the role of marketing research in business-decision making was enhanced" ($M = 4.00$) also support the findings of earlier studies and reemphasizes the benefits of incorporating experiential learning to provide students with both relevance and experience in applying theory to real-world issues. List of means, standard deviations, and *z* scores are listed in Table 1.

Discussion and Future Research

The purpose of this study was to explore student perceptions about the live-case approach in teaching marketing research. Results of this study suggest that students' opinions on the practical or realistic nature of the project remained high. Live-case projects are used in marketing courses to provide students with the opportunity to use or experience learned concepts, which eventually improves the overall learning. The findings of this study add to the body of evidence that clearly suggest student's positive disposition toward live-case projects and their perception of an enhanced learning experience in courses using live projects.

In line with Kennedy et al. (2001), students said the live-case project was more productive and more enjoyable than listening to a lecture and reported improved critical thinking skills because of the project.

Table 1
Student Perceptions on the Client-Sponsored Projects

Statements	SD	D	NAD	A	SA	M	SD	z interval test	
								Lower	Upper
My understanding of marketing research was enhanced.	5	4	7	26	5	3.47	1.14	3.14	3.79
My understanding of the data collection process was enhanced.	3	4	6	25	9	3.70	1.08	3.36	4.03
I gained firsthand experience of project execution, including data collection.	4	2	6	23	12	3.79	1.14	3.46	4.11
This project allowed me to practically implement technical/analytical concepts and skills learned in my classes.	5	4	8	23	7	3.49	1.18	3.15	3.82
My understanding of the requirements of effective reporting of research results was enhanced.	3	6	12	16	9	3.48	1.15	3.14	3.81
My understanding of the role of market research in business-decision making was enhanced.	3	4	9	20	11	3.68	1.13	3.35	4.00
My understanding of how to evaluate the tools necessary for gathering accurate information in an efficient, timely, and cost-effective manner was enhanced.	4	7	13	15	8	3.34	1.19	3.00	3.67
I used data analysis techniques to interpret the data collected and make appropriate decisions.	4	5	7	22	9	3.57	1.18	3.23	3.90
This project gave me an opportunity to successfully convince a client organization of the worth of my contribution to their organization.	9	4	11	15	7	3.15	1.35	2.76	3.53
This project improved my critical thinking skills.	4	5	12	17	9	3.47	1.18	3.13	3.80
The learning experience provided by this project was not worth the effort.	2	13	6	13	13	3.47	1.28	3.10	3.83
Having completed this project, I feel confident that I could complete this type of project for a company.	5	5	11	17	8	3.39	1.22	3.03	3.74
As a learning experience, this project was more productive than listening to a lecture.	1	2	5	23	15	4.07	0.90	3.80	4.33
As a learning experience, this project was more enjoyable than listening to a lecture.	1	2	6	21	15	4.04	0.93	3.76	4.31
This project gave me stronger motivation to work hard at learning than listening to lectures does.	1	8	8	18	11	3.65	1.10	3.33	3.96
Compared to group projects in other business-related courses, this project was more productive.	8	3	16	15	5	3.13	1.23	2.77	3.48
Compared to group projects in other business-related courses, this project was less enjoyable.	3	13	9	11	11	3.30	1.28	2.93	3.66

Note. SD = *strongly disagree*; D = *disagree*; NAD = *neither agree nor disagree*; A = *agree*; SA = *strongly agree*.

Also, students reported an increase in their skill of relating theory taught in the classroom to practice in the real world, which is essential in business education. However, students who undertook projects in other courses did not feel the live project in marketing research is in any way more productive than other projects they did in other business courses. Further, students suggested that this project was less enjoyable, which supports the findings of Maher and Hughner (2005).

Benefits

Live-case projects in the marketing research subject provide many benefits. Lecturer benefits in the project can be excitement, novelty, and, therefore, intellectual stimulation. Students from the course get skills that businesses consider to be intrinsically valuable. These include the ability to conceptualize and define marketing research problems: to design research projects; to collect, analyze, and interpret data; and to present the findings in a way that is attractive to managers.

Marketing educators use experiential marketing projects in their undergraduate marketing classes as they believe these projects are worthwhile. However, integration of live-case projects requires dedication, coordination, resources, and above all a time commitment from the instructor and the students. In addition, the potential for problems exists when students who have differing priorities and levels of responsibility leave the instructor to personally ensure the client project is complete. As Wickliff (1989) mentioned, using live-case projects in the classroom needs instructors to be comfortable with little uncertainty and to let go some control within the classroom.

Client projects educate professors about a specific business while providing an opportunity for them to network with local business professionals and identify potential research areas. This can serve as a stepping stone to more formal relationships between the university and industry. Businesses benefit from the projects in several ways. Costs are saved since the business receives a low cost or usually a deliverable with no fiscal outlay. Businesses receive an outside vantage point, and often they can undertake a project that might have been shelved or abandoned. Students receive an opportunity to deliver high-quality work and showcase their abilities to potential employers.

Challenges

The researchers identified several challenges since fall 2009. These challenges are not directly related to the use of live-case projects, but were related to the

difficulties in teaching marketing research to undergraduate students. As Bove and Davies (2009) pointed out, marketing students find marketing research less appealing. Time is another reason: a 15-week semester places stress on both students and instructor, as there is considerable time pressure to complete each phase of the research process. This compels students to keep abreast of the material by working ahead and usually even cover material before its being taught in class. Unlike simulated research projects, which are predictable, in live-case projects the instructor cannot plan or predict the nature of the results or the client's behavior.

Some of the other unanticipated challenges included a client's withdrawing midway because of changes in their situation. This unexpected withdrawal of the client from the project posed multiple challenges and grading issues. Also, sometimes students could not work toward the client's deadlines because of the schedules of other classes. Thus, this might lessen the motivation levels of the client and might lead to the client interacting less with the students or showing lack of enthusiasm in the research project. Therefore, students' experiences, and later perceptions, may differ widely as found in the current study.

Humphreys (1981) noted the experiential learning gained through the live-case project is "highly motivating to students, encouraging them to become active rather than passive participants in the learning process." However, the researchers noted during the time of this study that students' early motivation was lost if the client business is something the students did not like or if the research became difficult because of lack of information. It is also noted that if the client raises expectations, the students lose motivation. It is important to know that client projects are not a panacea that magically transforms the classroom into a perfect learning environment (Bush-Bacelis, 1998).

Implications for Educators

This case study showed there is value in live-case projects used in teaching marketing research. This study examined quantitative data to show the use of this approach increased student experience in the subject. This study also suggested that live-case projects can help students by providing relevant, real-life, job-ready skills that promote active student participation and engagement, both of which are laudable educational goals. The live-case project offers a platform by which students can gain conceptual and analytical skills that are valued by potential employers.

The researchers therefore support the use of live-case projects. They also agree with others that a live-case project needs to be workable and needs to fit specific course constraints (Lopez & Lee, 2005). In the

case described, the students' base-level knowledge of marketing management and strategy influenced the instructor's experience in teaching this subject. Another influence that contributed to the success of live-case projects is the client's cooperation and support; this client commitment is essential. Therefore, some external and internal constraints need to be satisfied if live-case projects in subjects such as marketing research are to be as fulfilling for the lecturer as they are for students and other stakeholders (i.e., the client and the marketing research industry).

Client based projects provide sound educational reasons as discussed above. These projects can also be used across disciplines. Cameron, Trudel, Titah, Léger (2012) used live-case studies in three different IS courses: IS project management course, a systems analysis and design course, and a capstone course on enterprise system implementation. In a study published by the American Association of Community Colleges (2002), service learning projects are important in increasing student learning and are used across disciplines and academic levels. Finally, Abes, Jackson, and Jones's (2002) study gave the faculty perceptions of the use of live-case projects or otherwise.

In conclusion, while there are sound educational reasons for providing a live-case project to students in marketing, there is a need for care and extensive planning in its implementation.

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- Wisconsin-Stout, USA and a visiting professor at the Arthur Lok Jack Graduate School of Business, University of the West Indies, Trinidad and Tobago. He designs and conducts workshops for professionals in the Middle East, the Caribbean, Europe, and India. His research interests are in teaching and learning in marketing with an emphasis on the use of student-centered teaching strategies. His research interests are also in the areas of international marketing, branding, consumer behavior, and new product development marketing in developing economies. Dr. Gundala can be contacted by e-mail: gundalar@uwstout.edu
- MANDEEP SINGH is a Professor of Marketing at Western Illinois University where he has been a faculty member since 1995. Mandeep completed his DBA from Southern Illinois University, Carbondale. His research interests center on the areas of marketing communications, marketing and technology, marketing strategy, and marketing analytics. He has collaborated actively with researchers across disciplines, and has designed and taught several courses for business executives, graduate, and undergraduate audiences in the United States, Europe, and the Caribbean.

Dr. RAGHAVA R. GUNDALA is an Associate Professor of Marketing at the University of

ANDREW BALDWIN is the Research and Data Manager of the College of Management at the University of Wisconsin-Stout.

Understanding Collectivism and Female Genital Cutting Through a Family Role-Playing Exercise

Carol Miller

University of Wisconsin-La Crosse

This study is a test of the effectiveness of a classroom role-playing exercise used to increase the understanding of cultural practices with which many Midwestern college students are uncomfortable. I employed a pre-test/post-test comparison group design. Students enrolled in two sections of a general education global issues course ($N = 56$) were asked about their perceptions about, and explanations for, the existence of female genital cutting in Egypt (the country they were studying). One section discussed the issue during a PowerPoint presentation, and the other section participated in an exercise in which they role-played family members deciding whether a daughter or sister would undergo the procedure. A comparison of post-test responses demonstrated increased understanding in both sections, but students in the experimental group better understood the collective implications of the practice on the entire family.

Can role-playing help students better understand why some cultures practice female genital cutting (FGC)? Students enrolled in a general education course at a mostly racially and ethnically homogenous state university in the US Midwest were required to play the roles of family members trying to decide whether or not a daughter would go through with FGC. Through this experience, students were expected to gain a deeper understanding of the controversial issue and how the practice affects more than just the individual females who are cut. They were required to contemplate the consequences of not going through with the procedure and the social and economic factors affecting those family decisions. Results show that student understanding of FGC did improve after the exercise, but more importantly, students were able to recognize the collective implications of a family's decision to require a daughter or sister to experience the controversial procedure. Hopefully, by increasing student understanding of a cultural practice many misunderstood and might even view as objectionable, ethnocentrism toward that culture as a whole was decreased.

Previous Research

The controversy over female genital cutting (FGC) is due in part to misperceptions about who is involved in the decision to participate in the ritual and the consequences of that decision for all actors. Thus, it is important to provide students the information about the individuals and organizations involved in the debate. That was the ultimate goal of the exercise and class discussion. As Kratz (1999) found, most students require additional information about the health, cultural and moral as well as human rights issues pertaining to FGC. In addition to not knowing anything about FGC, previous research shows that most students in the United States find it difficult to overcome their

individualist cultural perceptions while considering all of these issues (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1986). Because they cannot see outside of their individualist cultural lenses, students find it difficult to comprehend why anyone would agree to participate in something that not only poses health risks, but also affects such a personal part of one's body and life.

People from individualist societies focus on one's own interests and needs. Those from collectivist cultures consider the context of their needs within the interests of their "in-groups" (Hofstede, 1986, p. 307). Many African countries, including Egypt, have been classified as containing mostly collectivist cultural traits (Hofstede, 1984). Important life decisions—whether to marry, whom to marry, which jobs to take and more—are made based upon the consequences such decisions might have on the identity of other group members or the group as a whole. As Bellah et al. (1985) found, students in the US tend to focus on the individual rights, health concerns or issues of self-determination with less consideration of the consequences of actions on their families or communities. Additionally, there is a tendency to view women in less developed countries as having little choice in their lives (Kratz, 1999) or that FGC is "degrading" to women or a form of "torture" (Nnaemeka, 2005, p. 30). It is difficult for many students in the United States to understand how FGC is a choice that establishes women's identities within the context of their culture and community (Lionnet, 2005; Ntarangwi, 2007).

Discussing FGC is unavoidable in any course in which cross-cultural differences between the United States and any of the Northern African countries are examined. In the general education course I teach, one of the assigned readings is *Global Sociology* (Schneider & Silverman, 2009), which contains a chapter on Egypt and, inevitably, a discussion of FGC. My goal was to discuss FGC in class in a way that allowed students to begin to put aside their ethnocentrism on this issue.

Role-playing is a common teaching technique used in social science courses. In particular, setting up hypothetical family groups is useful in developing deeper understandings of issues that families face (Browning, Collins, & Nelson, 2005; Koropecj-Cox, Cain, & Coran, 2005). "Role-play allows students to develop and expand their understanding of family emotions, dilemmas, dynamics, and diversity in ways not possible through didactic instruction alone" (Browning et al., 2005, p. 4). Through role-playing, students not only increase their understanding of an issue because they must take the role of the other, they also increase their empathy toward people who must face similar problems (Browning et al., 2005).

I tested whether a role-playing activity in which students were required to take on the roles of family members deciding whether to have FGC performed on a daughter and sister would improve their understanding of this very complex issue. Through role-playing, students were hypothesized to better understand the cultural and demographic contexts of FGC. Additionally, such an exercise enhanced students' comprehension of the collective decision that families make about what is usually perceived as such a personal act.

Description of the Study

In order to test whether this role-playing exercise increased students' understanding of this cultural practice, I employed a comparison group, pre-test and post-test design. I administered a set of pre-test open-ended questions asking students to write short essays that allowed me to assess their knowledge and understanding of female genital cutting and why it exists (see Appendix A). Once students completed either the instructor-led presentation and discussion (in the control group) or the role-playing and discussion (in the experimental group), they were asked to write short essay answers to the same questions used in the pre-test in order to assess whether their understanding of FGC had changed.

The samples of both groups included undergraduates at a Midwestern state university enrolled in two sections of a general education course. The student population at the university was 89% White, non-Hispanic and 58% female. The experimental group—the group asked to role-play—consisted of 33 students enrolled in one section of the course. The control group consisted of 23 students enrolled in a second section of the course. Because this was a general education course, students with majors from all three colleges of the university were represented, and students from all levels of education (freshmen, sophomores, juniors, and seniors) were in the sample. I received approval from the university's

Institutional Review Board in order to conduct the in-class experiment.

During their 85-minute class periods, the experimental and control groups were both provided relevant information about Egypt, along with descriptions of the most common type of FGC in Egypt, explanations of the societal functions of the procedure and the risks involved. Specifically, as a class and led by the instructor, they discussed information provided in a PowerPoint presentation. The presentation and discussion for both groups, were based upon material in their assigned readings and illustrated how male unemployment and women's increased educational attainment and participation in the labor force have contributed to gender role conflict and increased concerns about marriageability. Both sections discussed how there is a belief that FGC purifies a girl, and that an adult woman who is not cut is viewed as unclean or unfeminine, but that ultimately the concern is that men prefer to marry women who have been cut, so uncut women are possible burdens on their families (Schneider & Silverman, 2009). Both sections discussed the health and psychological risks of FGC, and how, as outside non-governmental groups (NGO's) brought more attention to those risks, beliefs about the cultural value of FGC became more entrenched (Slackman, 2007).

Those enrolled in the section of the course treated as the experimental group were asked to break into groups of three or four students and were required to assign family roles (mother Mina, father Yussef, 15-year-old son Hassan, and young daughter Nafre) to each member. They were asked to decide whether or not Nafre would go through with the procedure, using the demographic and employment data provided to them as a base for their decision. They also had to consider how their decision would affect Hassan, Nafre's older brother (see Appendix B for the exercise instructions). Hypothetical characters of this family were introduced in the textbook, *Global Sociology: Introducing Five Contemporary Societies* by Schneider and Silverman (2009), so if the students had completed the required readings, they were familiar with their stories already. I added to their story by introducing other family members and additional background information.

Once the students made their decision, they were asked to report that verdict and their rationale with the rest of the class. After the class discussion students were asked to read a short *New York Times* article (Slackman, 2007) about female genital cutting in Egypt.

Students enrolled in the section treated as the control group were given the same chapter in the textbook (Schneider & Silverman, 2009) and *New York Times* article (Slackman, 2007) to read and that same PowerPoint presentation to discuss, so the only

difference between the two groups was that the control group did not participate in the role-playing exercise.

I compared answers to the short essay question between the control and experimental group and before and after the role-playing and the discussion. Specifically, I read through each of the written answers and conducted a qualitative content analysis. Since the answers were rather short and concise, there was really only one noteworthy difference in the themes that emerged. Students in the control group mentioned individual consequences of FGC, while students in the experimental group mentioned consequences of FGC for the family as a collective.

This exercise was also used as an assessment tool for one of the learning outcomes for this particular general education course, so I scored each essay on a scale of 0 to 5. A score of 0 indicated no understanding of female genital cutting, and a score of 5 indicated a thorough understanding of the issue which included what it was, the justifications for the practice, who makes those justifications, the consequences of not undergoing through with the procedure and the implications of outsiders getting involved in the issue.

Results

Analyses of the scores awarded to the pre-test and post-test answers students provided in both the experimental and the control groups showed that both methods of teaching about FGC were effective (see Table 1). Mean scores on the post-tests improved for both groups, and scores in the post-tests were not significantly different. One issue was that a few of the students in the role-playing group exhibited a significant and slightly better understanding of FGC in the pre-test. The course can be counted as an elective in the Anthropology minor, so a few students might have read about and discussed FGC in other classes.

Upon reading students' answers to the questions about FGC, it was obvious that before the role-playing exercise or lecture and discussions a majority of the students had no knowledge about or understanding of FGC. At the end of the classes, all but five students in

either the control or experimental groups expressed improved comprehension of the issue. Those five students' answers to the pre-test questions demonstrated a basic understanding of FGC, indicating they had probably either discussed this issue in previous courses or had read the assigned readings ahead of class time (something the rest of the students obviously had not done).

Pre-Test Understandings of FGC

Pre-test answers to the questions, What is female genital cutting? What are the justifications for this practice and who makes those justifications? What happens to girls if they do not undergo this procedure? What are the implications of outsiders getting involved in this issue?, often demonstrated no understanding (these questions were used as part of the General Education Assessment for this course in 2010-2011). For example, one student simply wrote, "I don't know anything about female genital cutting in Egypt." Another wrote, "The cutting of the female sex organ known as the clitoris. I'm not certain as to what the justifications are and who makes the justifications." Before the class exercise, lecture and discussions, many students believed the reason for FGC was to prevent sexual pleasure among women. For example, one student wrote:

It's a procedure that prevents women from having premarital sex. I think the justification has to do with making sure the women are kept "pure." I have no idea who justifies this, possibly their religion. If they don't undergo it they could be shunned from society. When outsiders get involved it becomes a hot debate topic because many cultures view this as cruel and barbaric.

This common response suggests that to these students, decreasing sexual desire is a manifest function of the practice, despite the fact that their assigned readings explained that decreasing sexual desire is understood to be a latent function amongst Egyptians who support it (Schneider & Silverman, 2009).

Table 1
t-Test of Mean Scores on Answers to Questions About FGC

	Pre-test score (SD)	Post-test score (SD)	<i>t</i>
PowerPoint/discussion, control group (<i>N</i> = 23)	1.13 (1.100)	1.88 (1.269)	-2.291*
Role-playing/discussion, experimental group (<i>N</i> = 33)	4.13 (.757)	4.06 (.747)	.342

Note. Test scores are on a scale from 0-5.

* $p \leq .05$.

Many students also believed that the justifications for FGC were religious-based, specifically a requirement of Islam: "Female genital cutting is the cutting of the clitoris. This is done as an Islamic religious sacrifice. They (women) are shunned if they do not undergo the procedure." Of course, as they learned through the exercise or presentation in class, as well as through their assigned readings (Schneider & Silverman, 2009), the practice is common in northern African countries, but is not specifically Muslim.

Post-Test Understandings of FGC and Collectivism

After participating in either the role-playing exercise (experimental group) or the lecture (control group) and discussions (both), more students were able to correctly describe what FGC is and why it is practiced. However, there were important differences between the post-test answers provided by students in the experimental and control groups in terms of their descriptions of who justified FGC and why. In the post-test, students in the control group correctly explained what FGC was, why it was performed, what happened if girls do not go through with it and when outsiders get involved. For example, one student wrote:

Female genital cutting is when a female has most if not all of her clitoris removed. The justifications for this practice are that it will make the woman more pure and make sure she doesn't have sex until marriage. If they do not undergo the procedure, they will be less attractive to men and find a hard time finding a husband. When outsiders get involved it sometimes just makes the issue worse because the Egyptians want to preserve their culture.

However, like the majority of students in the control group, this student did not correctly identify who justifies the practice. Most simply mentioned "the culture" or "society" as the source of justification. For example, one student wrote, "You have a higher chance in finding a husband because it makes you look pure. The society makes those justifications. It is passed on from generation to generation."

Post-test answers from the control group were missing an important element. They did not express an understanding of the implications for the procedure on the collective identity of the family within their community. They obviously recognized how girls were affected individually in terms of their personal identities, maintaining their purity and chastity and increasing their likelihood of marrying. However, students in the experimental group, those who had to take on the roles of family members who had to decide

together whether or not a daughter or sister in the family would experience FGC, expressed a deeper understanding of the implications on the family collectively. For example, one student who completed the role-playing exercise wrote, "The parents decide whether the cutting is done. If the girl doesn't do it she is seen as impure and a disgrace to the family." Another wrote,

In Northern Africa, it is justified by everyone in the family who wants young girls to be seen as pure and available for marriage. If not done, it is seen as a dishonor to your family, and these girls are considered not available for marriage.

The answers provided by the students who took part in the role-playing exercise were more complete and expressed an understanding of the collective implications of the procedure. For instance,

Female genital cutting is the removal of the clitoris and labia. The justifications for this practice (as justified by the young girls' parents) include making the girl more pure and more marriageable. If girls do not undergo this procedure they are viewed as impure and less likely to be married. Also, dishonor is brought to the family if the girl does not get the procedure. If outsiders get involved in this issue, it makes supporters of the procedure fight harder to keep it around.

Answers from students who did the role-playing were less likely to focus on individual consequences of not participating in the cultural practice of FGC and more likely to recognize the justifications within the context of the collective identity of the family within the community or culture. Since both the experimental and control groups were presented and discussed the same information about the explanations, justifications and risks associated with FGC, differences in responses could only be attributed to whether or not the respondents participated in the role-playing exercise.

Discussion

The topic of female genital cutting is difficult to discuss, especially among college students coming from an individualist society. It is very difficult for students who are pursuing higher education as part of their personal goal of individual achievement to understand collectivist implications. It is ironic that the thought of having such a private part of a woman's body surgically removed in order to appease cultural and societal expectations is foreign to most college students in the

US, despite their own efforts to adhere to norms of appearance and achievement. Overcoming individualism is extremely difficult, and I doubt one role-playing exercise changed their perspective completely. However, role-playing a family's decision about FGC helped overcome individualistic thinking on this topic simply by putting students in the position of discussing the implications for everyone in the family, not just the daughter or sister of focus.

The role-playing exercise proved to be effective in developing a deeper understanding of the cultural practice and in helping students overcome, at least for one class period, their individualism. Students who played the roles of family members trying to decide whether a young female in the family would go through with the procedure expressed an understanding of the collective implications of the practice. Students in the control group, who discussed the topic throughout a PowerPoint presentation focused on the implications of the practice for the girl only. Role-playing helped students overcome their individualism.

Of course, with any exercise, there might be difficulties. In larger classes, it is more difficult to scrutinize whether or not the students are indeed conducting role-playing and not just discussing the topic of FGC and reinforcing each others' discomfort with the practice. Therefore, it is necessary to move around the room and listen in on students' conversations during the exercise. Instructors might need to redirect any groups that are not following the instructions or reinforce correct information about FGC.

I did expect students to be uncomfortable with this topic. I expected there to be a lot more resistance to discussing it in class than I experienced. However, I believe that allowing students to take on the role of *the other* permitted them to discuss it more objectively. In other words, they all knew that they were discussing the viewpoints of fictional family members, so any discomfort could be deflected onto those characters and not each other personally.

As stated earlier, this family role-playing exercise could be useful in any course in which FGC is discussed. In fact, family role-playing could be used to help students understand the collective implications of any important decision usually viewed as an individual choice in United States culture. Decisions to marry, have, adopt and raise children, divorce, change jobs, move or make an important purchase, could be discussed from the viewpoints of each family member in order to demonstrate how everyone is affected somehow. Besides a general education course on global issues, such decisions could be discussed in any social science or humanities course in which collectivism is

presented. Using role-playing in order to require students to take the perspective of someone with any alternative viewpoint than what they usually take can be useful. Although students are not always excited about or comfortable with role-playing, this tool continues to be useful in facilitating deeper understandings of social and ethical issues.

One concern might be that with the little information and experience of trying to think like an Egyptian family member, students might be inclined to believe they have full understanding of the culture and what life is like to live within it. An instructor who uses role-playing in this manner would also have to go keep an eye out for such arrogance. Overall, I believe that the potential gains of role-playing outweigh such a risk. While the specific goal of this exercise was to increase their understanding of FGC and collectivism, the main objective is for students to realize that a cultural practice they had originally viewed as strange or irrational had a practical or rational explanation. In other words, requiring students to look through cultural lenses different from their own, by taking the role of the other, can decrease ethnocentric beliefs.

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CAROL D. MILLER is Professor of Sociology at the University of Wisconsin-La Crosse. She teaches Sociology of Gender and Global Inequality and conducts research on the effects of globalization and inequality in local communities. She is the author of the book *Niagara Falling: Globalization in a Small Town*.

Appendix A
Pre-Test and Post-Test Questions for Assessment

What is female genital cutting?

What are the justifications for this practice and who makes those justifications?

What happens to girls if they do not undergo this procedure?

What are the implications of outsiders getting involved in this issue?

Appendix B
Exercise Instructions: A Family's Decision

You are a rural farming family living in Bisat, at that edge of Egypt's western desert. Assign the following roles:

1. Yussef: 42, husband, father, farmer, part-time factory worker
2. Mina: 40, wife, mother, farmer
3. Hassan: 15, son, brother
4. Nafre: 13, daughter, sister

Important background information:

- There is no land in Bisat for Hassan to eventually take over and farm on his own, and on which to raise his family.
- "Every year 1.2 million people enter the labor force for the first time and half of them cannot find jobs (Schneider and Silverman 2010: 235).
- This affects Nafre's aspirations too. Her father's sister's son (her cousin Lalu) had been chosen for her as a marriage partner because Lalu's father was able to purchase an acre of land for him to farm in the future.
- However, because of his "fortune" he is a very desirable marriage partner and there are many other families (many relatives) hoping to establish a marriage contract with him and his family.

Your family must now make a very important decision. Should Nafre undergo female genital cutting?

1. What are the risks and benefits of this procedure?
2. What are the risks and benefits of NOT undergoing this procedure?
3. What factors (religious, economic, social, health, or others) did you consider when making your decision?
4. How does this affect Hassan, directly or indirectly?

Hold a family meeting and discuss this decision. What did you decide? Why?

Formative Plus Summative Assessment in Large Undergraduate Courses: Why Both?

Nirit Glazer
University of Michigan

One of the main challenges in large undergraduate courses in higher education, especially those with multiple-sections, is to monitor what is going on at the section level and to track the consistency across sections in both instruction and grading. In this paper, it can be argued that a combination of both formative and summative assessment is necessary in order to cope with the aforementioned challenge. A combination of the two types of assessment is necessary so instructors can provide formative assessment for learning and summative assessment for assuring that the formative assessment is done appropriately. In addition, the combination of the two also aids in other instructional challenges such as time management, instructor training, and balancing coursework overload. The proposed instructional perspective is illustrated by the Assessment Clock model that shows when to conduct the various assessment tasks, their frequency, and by whom, along with supplementary explanations and clarifications.

This paper focuses on the use of assessment to enhance consistency, particularly grading and instruction efficiency, in large post-secondary courses. Typical large post-secondary (i.e., higher education) courses include a head instructor, usually a faculty member, and several teaching assistants (TAs), typically graduate students. The head instructor is responsible for designing the course and delivering conceptual lectures, while the TAs often teach the hands-on labs and/or discussions, called sections. Large introductory level courses of 800 to 1,000 students might have as many as 40-50 sections, each with 20-30 students. In addition to the lectures, the head instructor is also responsible for coordinating the multiple sections and mentoring the TAs. One of the main challenges in such large courses is monitoring the individual section activities and tracking consistency across sections in both instruction and grading. It is important that all students be graded on the same basis regardless of the section to which they have been assigned.

The desire and call for consistency in teaching and grading across sections in a multiple-section course is mandatory, but unfortunately it has received little attention in the research literature. Nevertheless, it is a practical problem that has been observed and reported in the practical literature, such as in McKeachie's (2002) *Teaching Tips* book. There is often a lack of consistency in teaching and grading practices as well as diversity in leniency/strictness even when all sections follow the same curriculum and the same grading guidelines.

The call for consistency is not limited to the course level. Head instructors need to ensure consistency, across sections within a given semester and across semesters, by comparing course grade distribution with that of the course sections of previous years. In addition, the head instructor has to

“keep the distribution of grades consistent with that of other courses offered in the same department or school” (Ozaktas, 1994, para. 26). Arbitrariness in grading can result in unfairness and distortionary effects, such as students preferring courses by instructors issuing easier grades rather than courses for their educational content or instructors for their teaching ability. Some institutions have guidelines at the department level, such as a distribution policy of 40% A, 50% B, and 10% C.

Assessment should be equitable and fair. In higher education, especially in the case of large courses and multiple instructors, “whether it is in grading 1200 examinations or in assessing as many lab reports, first and foremost criterion in the grading rubrics is the desire and call for consistency” (B. P. Coppola, personal communication, March 20, 2006). Monitoring consistency in grading across sections throughout the semester, and between semesters and courses, is mandatory. In addition, grading issues should be one of the top priority topics to be elaborated in any TA training program, in course staff orientation, and in interactions between TAs and faculty instructors during ongoing staff meetings. Therefore, course coordinators, associated authorities such as department policy makers and the research community should focus more on the problem of a consistent grading system. To promote fairness and equality in an attempt to improve instruction in undergraduate education, it is necessary to have a combination of both formative and summative assessments, especially in large courses with multiple sections.

Assessment—Review of Relevant Literature

Assessment serves many purposes and can be implemented in many forms. Policy makers and administrators use it, among others, to track progress

and to make statistical comparisons across groups of students for budgetary decisions. In the classroom, teachers use assessment activities to monitor achievement and learning by students. In addition, teachers can use assessment tools to identify student misconceptions and also to identify strengths and weaknesses in the curriculum.

Beyond its role in student learning, assessment affects student lives. Performance on assessment activities often determines which students get into college and which colleges they attend. Assessment activities can result in achieving a degree from a first class college or from a lower class college. A fair and reliable assessment could better indicate who is really at the top. Particularly at the college level, assessment has a high value since it serves also for certification purposes. Educators should therefore pay extra attention to assure that assessment practices are not only meaningful for learning, but are also fair and consistent with respect to instructors, courses, years, and institutions, and that a student, regardless of the section/semester he/she is enrolled in, would receive the same course letter grade. Assessment is a key component in the learning cycle and should be valid, reliable, and transparent. Validity and reliability are the heart of assessment discussions especially in large-scale assessment activities (Atkin, Black, & Coffey, 2001). In an equitable and just grading system, students ideally will achieve the same final letter or numerical grade regardless of the section or semester in which they are enrolled.

Two key strategies for classroom assessment have emerged and have been debated among education scholars: formative and summative. Formative assessment uses feedback to improve teaching and learning, while summative assessment measures what students have learned to certify a grade.

Formative assessment is any task that provides feedback to students on their learning achievements during the learning process. It includes, for example, open-ended response questions, essays, and performance tasks, such as posters, presentations or projects. It may also include closed-ended questions, such as multiple-choice questions, when used for providing feedback to guide the learner's growth. Race (2009) emphasized the importance of having qualified feedback by first restating an analogy he credits to John Cowan, "Assessment is the engine that drives learning" (p. 47), and then extending it to add that, "feedback is the oil that lubricates the cogs of understanding" (p. 47). Thus, the ways feedback is produced are important for achieving maximum efficiency of the learning process (Black & Wiliam, 2003, 2006; Nicol & Macfarlane-Dick, 2006; National Research Council [NRC], 2001; Race, 2009; Weurlander, Söderberg, Scheja, Hult, & Wernerson, 2012).

Formative assessment activities are ongoing and part of the learning process in the classroom; it features activities that provide feedback to the students and teachers during the learning process, rather than after a period of instruction. The main purpose of formative assessment is to contribute to student learning through the provision of by providing information about performance (Yorke, 2003). Formative assessment may also serve as a learning tool by students (Heady, Coppola, & Titterington, 2001). It brings up opportunities to integrate activities that encourage students to think critically and to practice lifelong skills, such as presentation, communication, analytical, and problem-solving skills, as well as to practice teamwork. The exposure to such lifelong skills could also help students who are not performing well on traditional assessment tasks to demonstrate their knowledge in alternative ways (Cerny, 2005; National Center for Fair and Open Testing, 1999).

Summative assessment is used for evaluation, in which there is limited or no feedback beyond the achievement report, and is usually a numerical or letter grade score. Summative assessment is an activity, typically a written test given at the end of a term, chapter, semester, year, or the like, for grading, evaluation, or certification purposes. Summative assessment includes, for example, closed-ended questions, such as multiple-choice, true/false, and fill-in-the-blank questions. It may also include open-ended response questions when used for evaluating achievements; high-stake tests, such as ACT, GRE, and SAT. Summative assessment may further include state-standardized tests which are designed for policy and budgetary decisions. The same questions could be originally designed and used for one purpose (e.g., a summative purpose) and may later be used for another purpose (e.g., a formative purpose). Glazer, Hofstein, and Bar-Dov (2002), for example, analyzed student responses to the questions on the national matriculation exam, which questions were originally used for high-school certification and which are to be used later on for formative purposes, specifically, for providing feedback to students about common difficulties, such as misunderstandings and misconceptions, to prepare them better for their matriculation exam.

Feedback

The usefulness and effectiveness of assessment depends on the quality of the feedback. Educators and policy makers recognize such feedback as an essential factor in student learning, and therefore they strongly recommend that such feedback be prioritized in the curriculum practice (Atkin et al., 2001; Black & Wiliam, 1998a, 2003; Nicol & Macfarlane-Dick, 2006; Quality Assurance Agency for Higher Education,

2000). However, in practice, this area is still in its infancy, and many instructors still struggle with providing productive and timely feedback.

Assessment is effective only if students or instructors use the information generated from an activity to help decide on the next learning activity (Atkin et al., 2001; Biggs, 1998; Black & Wiliam, 1998a; Cowan, 2003; Sadler, 1998).

Feedback should be targeted to enhance learning and motivate students to study. Therefore, feedback should be realistic with respect to expectations and should include, not only areas for improvement, but positive feedback as well (Race, 2009; Weaver, 2006). The literature provides several suggestions as to make the feedback more useful and how to encourage students to use the feedback appropriately.

One suggestion is to have clear criteria and to share the criteria with the students before the assessment assignment. It is also suggested to use descriptive criteria and detailed comments, rather than numerical scoring, to improve feedback (Butler, 1987). Frederiksen and Collins (1989) used the term “transparency” to express the idea that students must have a clear understanding of the criteria for grading their work before they start working on the assessment task. Ideally, it should be so transparent that students will be able to evaluate their own work in the same way that their instructors do.

Another suggestion is to engage students in the feedback process in order to enable them to take control of their own learning and thereby to enhance their learning (Black & William, 1998a; Boud & Molloy, 2013; Nicol & Macfarlane-Dick, 2006; Race, 2010; Yorke, 2003).

Still another suggestion is to avoid too much feedback. Instructor should set priorities and highlight the most useful comments. Similar to other disciplines, such as usability and computer user interface, feedback should comply with the three-click rule (Zeldman & Marcotte, 2009), in which, to avoid frustration, users should click no more than three times to find the desired content. Similarly, students should have to address no more than three major feedback items at a time.

A still further suggestion is to avoid generic comments, such as “excellent,” “poor,” or “try again.” For example, when assessing a graph, rather than commenting to the student that “the x-axis and y-axis are bad,” it would be preferable that the student receive specific guidelines of how to improve the axes. These guidelines could include how to label the axes correctly, how to scale them, or how to decide on their range of values in order to eliminate wide open spaces (i.e., dead areas).

Yet another suggestion is that an appropriate feedback should be timely and frequently made in order

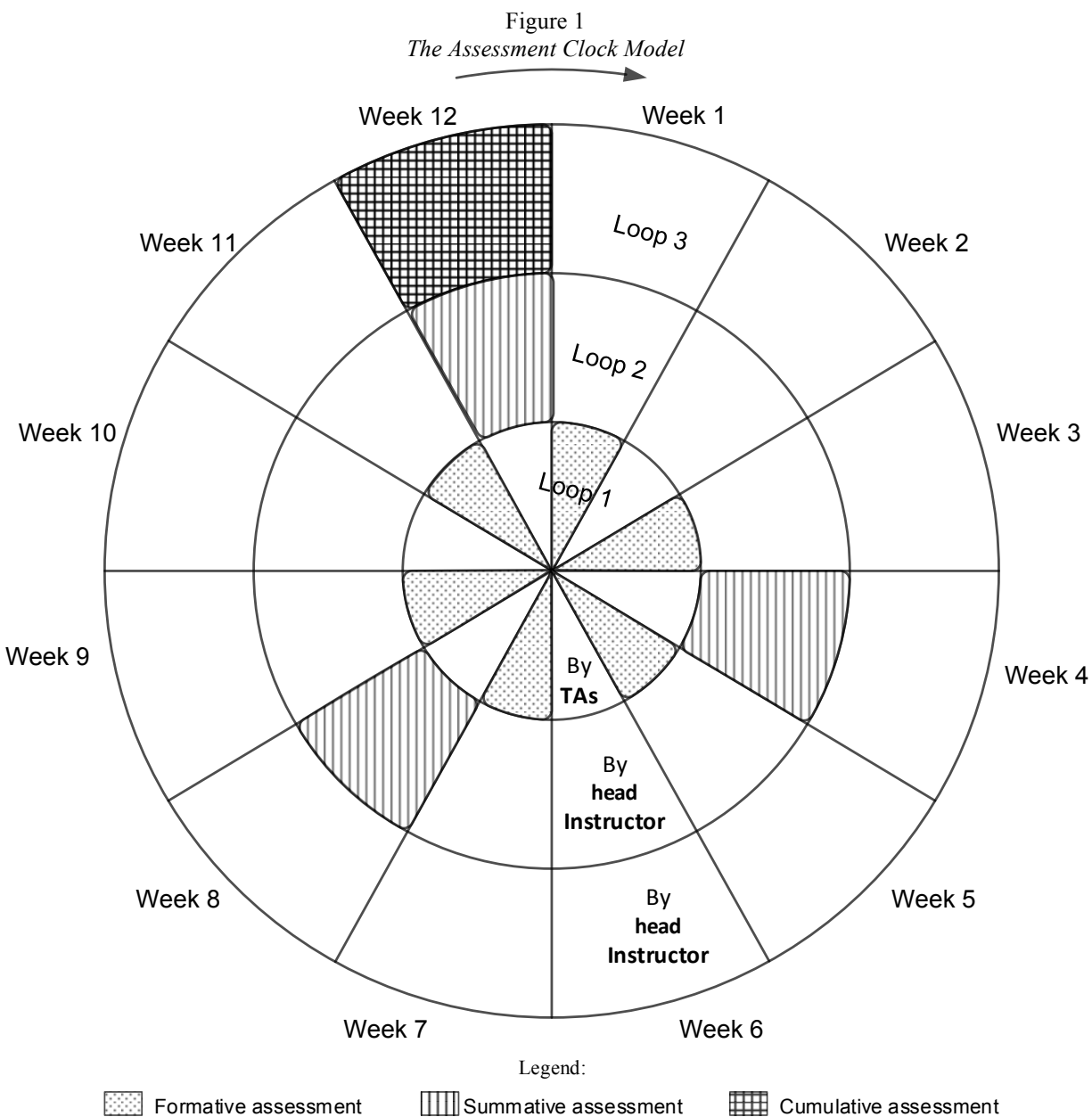
to avoid repeating mistakes and to practice acquired skills effectively and efficiently (Black & William, 1998b; Boston, 2002; Cowan, 2003; NRC, 2001; Weaver, 2006).

The Need for a More Consistent and Reliable Classroom Assessment

This paper focuses on the use of assessments to enhance consistency in grading across sections, and to inform instructors regarding diversity in leniency/harshness and when following grading guidelines. It deals only with classroom assessments that are part of the ongoing classroom life (e.g., assignments, exams, projects, and graded homework) involved in formal situations undertaken by the instructor of the course (Atkin et al., 2001). Such undertaken situations suggest the necessity of having both formative and summative assessment activities integrated together into multiple-sectioned courses, particularly in introductory courses at the college level.

Many papers describe the pros and cons of each assessment, formative and summative, and discuss which is more useful in various situations. Some have argued that formative and summative assessments are so different in purpose that they have to be kept apart (Black, Harrison, Lee, Marshall, & Wiliam, 2004). It is submitted, however, that in large courses at the college level, both forms are necessary, and one cannot be used effectively without the other, particularly those with multiple sections. It is also submitted that the assessment cannot be only summative because then students will not receive the sufficient feedback critical for learning. Nor can it be only formative because without outside and more objective tracking, the immediate classroom instructors might inflate grades and/or fail to cover essential material. By combining formative assessment with summative assessment (in an outside objective test that is run by the course coordinator), summative assessment will serve as a standardized test to compare the achievements of students from different sections, thereby reducing bias from subjective grading. Using the formative and summative combination method also provides more perspectives than a separate assessment and brings different forms of evidence together, which thereby increases the degree to which each assessment measures what it is intended to measure; thus using the forgoing method contributes to the validity (accuracy) of each assessment. Assessment validity is particularly important in higher education, since assessment plays a significant role in student life (Secolsky & Denison, 2012).

This instructional perspective is illustrated further by the Assessment Clock model below (Figure 1). In



addition to the combination of formative and summative assessments, the Assessment Clock model also shows when to conduct the various assessment tasks throughout the semester, their frequency, and by whom, along with supplementary explanations and clarifications.

Instructional Implementation—The “Assessment Clock” Model

Figure 1 represents time, similar to a clock, by using patterns to allow clear observation of the

frequency of the assessments and their types. As indicated by the legends, the “dotted” pattern corresponds to the formative assessment, the vertical lines pattern corresponds to the summative assessment, and the grid pattern corresponds to the final processing of all assessments. Such final processing includes the assignment of credit for non-graded aspects in the course, such as effort, safety in the lab, etc. The model is circular to show that assessments have a continuous effect on course instructions beyond a respective semester. The small arrow at the top of the Assessment Clock model

represents the continuation of the assessment process and its evolution from one semester to the next.

The balancing of formative and summative assessments is a key consideration in the model. This balancing can occur by strategically designing assessment tasks that use feedback procedures to enhance learning, and also objective baselines that allow comparisons across groups, for example, across multiple sections within the same course. To maximize consistency and to eliminate variations, it is recommended that both summative and formative assessment tasks be the same for all sections, regardless of their format.

Assessment Clock Model Structure

The proposed model entails three loops of assessment activities. The first loop (loop 1, Figure 1) is an assessment conducted by the immediate instructor (i.e., TA). The second loop (loop 2, Figure 1) is conducted by the course coordinator (i.e., head instructor). The third loop (loop 3, Figure 1) indicates the final grading process, where the head instructor determines the final grades and reports to an upper level authority (e.g., department, college, provost office).

The non-patterned areas in the model stand for the absence of any particular assessment task. During such times, the instructors should work with the students on the feedback they have previously received so that the students will be able to use that information effectively in their next assessment task.

Value of the Assessment Clock Model

Loop 1. In this loop, it is important to have frequent formative assessment as part of the ongoing instructional process. This can be done either individually, in pairs, or in teams, and can be planned as frequently as every two or three weeks. Tasks should be of the formative type, such as writing lab reports or doing poster presentations, where students have a chance to actively engage in the learning process and to benefit by being exposed to various learning skills.

Tasks, such as the lab reports or poster presentations, should be repeated as the semester progresses in order for the students to gain experience and to develop expertise in a specific skill. It is possible to have more than one type of formative assessment task, for example, writing lab reports and doing poster presentations. Each type of task should be repeated a few times every semester in order for the students to develop adequate important skills. To maximize consistency and eliminate variations, formative assessments, similar to summative assessments, are recommended to be the same for all sections. For the sake of uniformity, the assessments

should be designed by the lead instructor and then could be followed and graded by the local instructors (TAs).

Loop 2. In this loop, it is important to have a summative assessment carried out two or three times in each semester. The tasks should include objective items, such as true/false, multiple-choice, and matching questions. The objective items will assure the equitability and consistency of the formative assessment guidelines with respect to multiple instructors and multiple sections of the same course. All students will do exactly the same summative tasks, ideally at the same time. In this way, the summative assessment will serve as the baseline for comparison with respect to groups of students and groups of instructors.

While the formative tasks in the immediate loop (loop 1) can be done to test either individuals or teams, the summative assessment (loop 2) should test the individual. Thus, the performance comparison between the formative and the summative assessment activities can highlight differences between an achievement of an individual and an achievement of a team; the latter does not necessarily reflect the understandings or skills of individuals in the respective team.

Loop 3. This loop occurs at the end of each semester, when the head instructor takes into account the performances of the students in loops 1 and 2, and assigns final letter or numerical grades. Decision, such as cut-offs, can then be used for normalizing grades. At this point, the immediate instructor will assign credit for non-graded aspects of the course, for example, efforts by students in the course, observations of safety procedures in the lab and contributions by individuals to the team efforts.

Example of an Assessment Clock Model Implementation

Table 1 illustrates the use of both types of assessment for providing constructive feedback to the instructor in an effort to improve grading and to maximize consistency in a large multiple-sectioned introductory chemistry course (of over 1,200 students, taught by 28 different TAs in 56 sections). All tasks, regardless of their format (summative or formative), were the same for all sections. The given example is from a large science class, but the assessment clock model is in fact useful across many disciplines.

The formative assessment (loop 1, Figure 1) in the example below was constructed of six sets, each set being constituted of lab reports and oral presentations (student-centered discussions), and the summative assessment (loop 2, Figure 1) was constituted of two written exams (mid-term and final), including mostly multiple-choice questions.

Table 1
An Implementation of the Assessment Clock Model

TA ID	Section #	Formative assessment (%)*	Summative assessment (%)
C	29	85.1	83.9
C	34	84.3	84.0
D	27	85.2	78.6
D	47	82.7	78.3
H	37	84.0	82.8
H	51	82.4	80.3
J	53	80.2	79.5
J	55	79.3	78.5
T	10	86.8	78.0
T	18	86.2	75.5
U	11	86.3	83.7
U	16	86.2	83.7
V	2	88.7	80.9
V	3	88.0	78.3
X	6	87.1	78.7
X	14	86.2	80.9
Course <i>M</i>	--	84.6	79.9
STD	--	2.14	2.9

Note. Formative assessment includes lab reports and presentations. Summative assessment includes the midterm test. *% of success up to the midterm test.

By comparing student performances in the various formative tasks, and their achievements in the summative (more objective) tasks, in a manner similar to the comparison in Table 1 above, instructors can receive feedback regarding the quality of instruction and assessment across the course sections. One common example was the case where the classroom instructor did not provide specific feedback and grades as generously as other instructors did. Typically, those sections performed poorly on the summative assessment tasks. The differences in the performances of the students in their formative assignments, and their achievements in the summative tasks showed up immediately.

If a section is performing exceptionally poorly or exceptionally well in the summative tasks, it is expected that the average performances in the formative tasks will be lower or higher, respectively, than the overall course average. If not, this would provide an alert to look for grading exceptions within the section, or to determine if the instructor grades too harshly or too leniently. This will also provide an indication whether there are one or more students who shift the average by underperforming or excelling. The comparison in Table 1 may prompt one to assume that the average performance trends would be similar in various types of tasks. However, such an assumption would be wrong because the comparison was made between the average of groups, rather than of individuals.

In case a problem can be identified, preventative actions can be taken during the semester, such as working closely and providing more guidelines for the instructor to teach and grade more appropriately. Thus, the combination of formative and summative assessment activities is necessary to create a mechanism for independent feedback in order to identify weaknesses in teaching quality. After the first summative task, the instructors may identify and correct problems of which they were not aware.

For example, instructors V, T, and X in Table 1 above appear to be too lenient. Their students received relatively higher scores in the classroom tasks; however, the exam scores were at about the average of the course, specifically, within the standard deviation (STD). In another example, instructor J appears to grade too strictly: the students in the respective sections received relatively low scores on the class work below STD, but average scores at the exam. Instructors C, D, and U, are examples of TAs that grade "just right"; their student scores for both the class work and the exam are within the course STD.

By combining the two types of assessments, such as in the latter examples in Table 1 the summative assessment can serve both as a preventative action and as a corrective action. Implementing an independent assessment as a comparison mechanism motivates instructors to follow guidelines more carefully and to provide better feedback, since any shortcomings in teaching quality will appear in the independent

summative assessment. In addition, after the first summative task, the instructors will be able to identify problems of which they were not aware, and to make appropriate corrections. The combination of formative and summative assessment is very useful also for comparing individual work to work done in a team when applicable. This combination has also other advantages, such as balancing the course workloads of students and instructors, and the management of time. However, the combination is deemed necessary mainly because it enables having assessment for learning, and creates a tracking system better assuring that the learning activities are done comparatively and are graded properly.

Model Implementation Challenges

Designing both formative and summative assessment activities, which can be integrated into the curriculum as part of the learning process, is both challenging and worthwhile. Time and training of instructors are the main challenges that are associated with implementing the Assessment Clock model in Figure 1.

Time. Time is one of the major barriers in implementing good assessment practices in the classroom; it is particularly challenging when employing both formative and summative assessment. Balancing time for instructions and time for assessment,

during the instructional timeframe, becomes particularly challenging in the case of large class sizes in which the instructors are faced with large numbers of students and other constraints. Thus, the combination of summative and formative assessments helps with balancing time and course overload for both students and instructors.

Training. In an attempt to improve teaching quality at the college level, many departments now offer pedagogical training to new TAs. One implementation of such training is to incorporate assessment-related case study sessions of real-life TA situations, followed by teaching dilemmas (Coppola, 1996; Kerner, Black, Monson, & Meeuwenberg, 2002). The case study strategy exposes the new TAs to critical aspects of assessment, such as the need for quality feedback as well as a consistent grading system. The new instructors can thus better understand their roles and responsibilities and the importance of having both assessment procedures, one that provides feedback to the students, and one that allows comparisons, which increase objectivity and drive consistency with respect to sections and instructors.

A situation that frequently arises involves assessment practice and the issue of fairness in large multi-section courses. This is illustrated by a case study, developed by the author and schematically shown in Figure 2. All tasks in the case study,

Figure 2
A Sample Case Study for TA Training: Unfair Grading

Case Study for TA Training: Unfair Grading

>From: Student xxx@xxx.edu
>To: Head Instructor
>Subject: Grades

First off, I don't want you to think this e-mail is attacking you in any way. I just feel it is necessary to inform you of how the grading in chem125 is very unfair. My roommate and I both have CHEM125, but we have different GSI's [TAs]. We do many of our lab reports together and most of the time she ends up with a better grade. On top of that, she told me that her GSI informed her that her section had the highest lab report scores, but the lowest tests grades. Shouldn't this tell you something?

In addition, she had her last lab today. When I asked her how it went she said well; her GSI helped her out when they had trouble. Isn't that nice! Mine would not even give me a straight answer when I asked if we needed to include the net ion equation. This does not seem fair to me!!!!

Discussion Dilemmas and Guided Questions:

What are the key issues presented in this case study? Why those key issues are so important?

If you (as a GSI, either the strict grader or the lenient grader) witnessed such an event, how would you respond to this particular situation?

Facts: The last lab is a "hands-on test" during lab time. The GSI served as a safety person and was not to answer any question regarding lab procedures.

Table 2
Results of Student Learning in Each Section of the Case Study of Figure 2

	Exam 1 average (%)	Exam 2 average (%)	Total average (%)
“Lenient” TA	76.6	74.5	82.2
“Strict” TA	83.0	78.9	84.6
Course Average	82.5	80.3	85.0

regardless of their format (summative or formative), were the same for all sections. The case study was developed from an email sent by a student to the head instructor and was followed by a discussion of dilemmas and guided questions, as set forth in Figure 2.

The results of student learning in the above case study, using the formative and summative combination method, are given in Table 2. Clearly, the students of the “lenient” instructor performed poorly on the summative assessment tasks (i.e., exams), in comparison to the course average; their instructor graded generously and did not provide as much specific feedback as the other instructors. In contrast, the students of the “strict” instructor performed at the course average on both the summative and the formative tasks. Overall, the students of the strict instructor finished the course with better final grades than the grades of the students of the lenient instructor.

Training sessions for TAs provide an opportunity for including practical sessions and for addressing issues in the grading of formative assessment tasks that are challenging. One such example is the grading of a student presentation in student center learning. Having students present their results in the form of oral presentations is a worthwhile learning experience. It allows students to form a greater understanding through the act of organizing their thoughts during an active verbal discourse (Kenny et al., 2002). It also provides invaluable opportunities for students to practice essential skills that are useful in their continuous learning and in everyday life such as data analysis (Glazer, 2011) and public speaking skills (Association of American Colleges and Universities, 2007; Schreiber, Paul, & Shibley, 2012). However, the grading of such an activity is very challenging, particularly when the instructor is required to evaluate the quality of the presentation and to provide appropriate feedback for making necessary corrections, all within a specified short time period. The complexity of such grading often causes a large diversity in the quality and quantity of the feedback given by instructors. This suggests a strong need for a simple grading rubric that is easy to interpret for aiding the TA to quickly grade the presentation. For example, a grading rubric that includes a list of criteria, which the instructor can evaluate quickly each criterion on a Likert scale while listening to the presentation, and finalize the total score

later. A sample grading rubric for student oral presentation is provided in the Appendix.

Conclusion

Assessment has a critical impact on student life, both in providing appropriate feedback for enhancing learning, and in providing a grade, which can determine the career and academic opportunities of a student. Instructors should be concern about that impact and should adjust their teaching and grading, by using formative assessment for enhancing feedback and learning, and by using summative assessment for comparison purposes. The above argument shows the necessity of the combination of both. It also suggests a model for such combination in higher education courses, namely the Assessment Clock model in Figure 1. This model of assessment tasks represents just one of many options that an instructor should use. In the proposed model, determination of the frequency and the types of summative activities, in combination with the formative activities, are necessary for an effective assessment plan. In the proposed model, the summative activities are given no more than two to three times during a semester. The formative tasks are given more frequently, even as frequently as every other week; they are repeated in the same format as the semester progresses so that students will gain experience and develop expertise in a specific skill.

The literature clearly shows that formative assessment has a central role in enhancing learning. It is important, however, to consider real constraints since the implementation of quality assessment is time consuming for both students and instructors, and requires appropriate training of the instructors. Summative assessment is simpler to implement, especially in large courses, where technology assisted exams are commonly used. Therefore, the combination of formative and summative assessments helps with balancing work overload of instructors.

Similar to standardized tests that allow comparisons with respect to different schools and/or different teachers, the summative assessment tasks in a large college course allow comparisons with respect to different sections and/or different instructors of the same course. Results from such summative tests provide immediate feedback to the instructor regarding

the mastery of a subject area or of a specific skill by students in the instructor's section, in comparison to students from other sections. In addition, educators may use the summative results to improve instruction by providing information on how to better follow, more consistently, grading guidelines.

Consistency in grading is very important and is often neglected. Summative comparison across sections is critical to reduce differences among instructors, especially in the case of a multiple-section course. Arbitrariness in grading can result in unfairness as well as in distortionary effects, such as a preference by students for instructors in their grading (lenient, strict) or in their teaching ability, rather than for courses educational content. Using both summative and formative assessments is an important mechanism for identifying potential weaknesses regarding the instructions. It is also important for comparing the average achievements of groups of students in both assessments. Yet, before taking any further steps, the instructor should identify any exceptional students within the group that may shift the average significantly.

The literature shows that formative assessment with quality feedback enhances learning and achievement (Atkin & Coffey, 2003; Black & William, 1998a, 1998b; Boston, 2002; Bransford, Brown, Cocking, Donovan, & Cocking, 2000; Cowan, 2003; Yorke, 2003). It also shows that without informative feedback, students will exhibit relatively little progress their development. In addition, summative assessment increases objectivity and consistency with respect to various groups of students. Imagine a situation where students receive no feedback or instructors have no outside tracking system in place on their teaching quality and their grading. If students have only summative assessment, they will miss all the educational opportunities of feedback, and if they have only formative assessment, the grades may be inflated. The combination of the assessments is necessary so that there will be formative assessment for learning and summative assessment for assuring that the formative assessment is done appropriately.

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NIRIT GLAZER holds a PhD in Educational Studies from the University of Michigan. Her research interests focus on the use of technology to enhance teaching, learning, assessment, and curricular activities, and on the study of usability and perception to promote emerging technologies in education at both secondary and college level education. Correspondence should be addressed to Nirit Glazer (nirit.glazer@gmail.com).

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Appendix
A Sample Grading Rubric for Assessment of Oral Presentations

Date: _____ Section#: _____ Team#: _____ Question#: _____				
%	Criteria	Scale (circle one) Weak(1)...strong(10)	Comments	Total % (%*scale)
10%	Organization Presentation includes introduction, main section, conclusions Each part is clearly defined	0...1...2...3...4...5 ...6...7...8...9...10		
10%	Introduction: the question/problem is addressed & presented clearly	0...1...2...3...4...5 ...6...7...8...9...10		
10%	Conclusion of the question/problem is addressed & presented clearly	0...1...2...3...4...5 ...6...7...8...9...10		
25%	Overall accuracy of content (e.g., clear, scientifically correct, trend/relationship addressed correctly)	0...1...2...3...4...5 ...6...7...8...9...10		
10%	Appropriate use of evidences The main points are made clearly and supported by evidence	0...1...2...3...4...5 ...6...7...8...9...10		
20%	Visuals (clear fonts, appropriate titles, labeling, a reasonable choice for the types of visuals such as the type of the chart/tables)	0...1...2...3...4...5 ...6...7...8...9...10		
5%	General impression: confidence, familiar with the material, a suitable pace for comprehension, appropriately loud, eye contact, and clear	0...1...2...3...4...5 ...6...7...8...9...10		
5%	Handling of Questions Provides accurate and appropriate (length and depth) responses when answering questions to classmates or to the TA	0...1...2...3...4...5 ...6...7...8...9...10		
5%	Overall Effort	Zero or 5%		
Total (%)				
Total (points)				
General comment:				

Experiences in Postsecondary Education that May Lead to Cultural Intelligence: Exploring and Proposing Practices

Solange A. Lopes-Murphy
The College of New Jersey

Cultural intelligence is among the top essential learning outcomes for college graduates. Despite the emphasis on internationalizing higher education and the increased culturally focused initiatives across campuses, fewer than seven percent of college-level students meet even basic standards for cultural intelligence by the time they graduate with a bachelor's degree. Research on the postsecondary experiences that lead to cultural intelligence is still rather limited. This paper, through an extensive review of the literature, presents the context of global education in higher education, discusses cultural intelligence and its dimensions, and presents recommendations on ways to infuse culturally intelligent practices inside and outside of postsecondary classrooms.

The global context today is characterized by rising diversity where cross-cultural exchanges have become common. Engaging in cross-cultural interactions is no longer restricted to those who travel abroad or live in big urban centers characterized by great diversity. Diversity is everywhere, and individuals from multiple countries, cultures, and languages are present in most social and professional contexts. This multicultural context forces us to reflect on the competencies one needs to engage in successful cross-cultural interactions. According to Maznevski (2008), the success of those cross-cultural interactions depends on each person's level of cultural intelligence (CQ).

Having a global mindset to function effectively in a global context is a skill considered essential to all professionals today (Dyne, Ang, & Livermore, 2009; McCrea & Yin, 2012; Yoshimura, 2012) that serves as the competitive advantage (Egan & Bendick, 2008) for the global professional. The question then is, how do we help ourselves and others become culturally intelligent? As an educator, I often wonder about the types of pedagogies and experiences I must bring into my postsecondary classrooms to promote deeper understanding of cultural differences, to better prepare my students for the cultural challenges in their future career, and to help them become culturally intelligent. The literature on the specific experiences that lead to cultural intelligence in postsecondary education is limited (Crowne, 2008; McCrea & Yin, 2012); hence, the purpose of this paper is to inform faculty, through an extensive review of the literature, as to what research has identified as the key elements of cultural intelligence and the types of experiences that may affect college students' global mindset and cultural intelligence. This article starts with a review of how global education has been infused in the higher education curriculum. It then explores cultural intelligence, its meaning and dimensions, and presents current practices toward cultural intelligence. Finally, the paper provides recommendations for additional

experiences that may lead to cultural intelligence in postsecondary classrooms and recommendations for future research on CQ.

Framework Selection

Combinations of the descriptors "cultural intelligence," "higher education," "postsecondary classes," "globalization," "21st century skills," "global economy," and "culturally intelligent" classroom practices were used to identify relevant works that described experiences that may lead to cultural intelligence inside and outside postsecondary classrooms. The framework adopted to organize the material from 55 publications is the concept of CQ and its four dimensions (Ang et al., 2007), and this framework is used to explore instructional experiences, ranging from the classroom to a more comprehensive and campus-wide perspective, that can enhance the cultural intelligence of college students.

Global Education in the Postsecondary Curriculum

Intercultural knowledge and competence are among the essential learning outcomes for college graduates (National Leadership Council for Liberal Education and America's Promise [NLCLAP], 2007), and cultural intelligence is regarded as one of the essential skills professionals need to compete globally in the 21st century (Montgomery, 2011). As a result, cultural intelligence has attracted increased attention in the literature. However, the literature on CQ in higher education has mainly defined CQ as a needed asset in the global business context (McCrea & Yin, 2012), a skill able to predict "the success of business enterprises today" (Egan & Bendick, 2008, p. 387). Consequently, the emerging empirical research on CQ in the postsecondary context comes predominantly from business schools (Crowne, 2008; Egan & Bendick, 2008; Lovvorn & Chen, 2011; McCrea & Yin, 2012),

which suggests that the concern with CQ is not yet widespread in the higher education community (Montgomery, 2011). As a result, fewer than 7% of college graduates meet even basic standards for cultural intelligence (NLCLEAP, 2007).

Diversity learning and internationalization have become top priorities in the higher education curriculum (Dezure, Lattuca, Huggett, Smith, & Conrad, 2014). Courses that emphasize global education are commonly part of the foundational courses in the postsecondary curriculum (McCrea & Yin, 2012). Exposure to cultural, social, political, linguistic, economic, and other diversities is intentionally crafted into the requirements of general education curricula, and students must meet the global education criteria for successful completion of their undergraduate degrees. In addition to courses, US colleges and universities have devised a variety of initiatives to promote intercultural communication and understanding. However, there is a scarcity of research on the impact of such experiences on participants' attitudes and behaviors and on their ability to interact effectively with individuals different from themselves (MacNab, 2012; Ng, Van Dyne, & Ang, 2012).

Institutions of higher education also highlight their commitment to global education by drawing attention to their study abroad programs or international internship experiences. A significant body of literature validates the benefits of international immersion experiences on participants' cultural awareness, sensitivity, understanding, and personal development (Black & Duhon, 2006; Gullekson & Tucker, 2013) and their limitations (Simonelli, 2000; Sherriff et al., 2012). The reality is that researchers such as Crowne (2008), Ng et al. (2012), and Tay, Westman, and Chia (2008) have maintained that these experiences alone do not translate into a global education agenda.

Understanding Cultural Intelligence and Its Dimensions

CQ refers to "*an individual's capability to function effectively across cultures*" (Dyne et al., 2009, p. 2). Assessing an individual's capability to be successful in cross-cultural encounters requires consideration of multiple dimensions so that effectiveness across cultures can be examined.

Dyne et al. (2009) developed a CQ model that incorporates four dimensions necessary to assess an individual's ability to function successfully across cultures: cognitive intelligence, metacognitive intelligence, motivational intelligence, and behavioral intelligence. That is, cultural intelligence involves "the head (cognitive), heart (motivation) and body (body language)" (Egan & Bendick, 2008, p. 391). It is believed that the more individuals develop these types

of intelligences, the more culturally intelligent they become (Crowne, 2008; Dyne et al., 2009; Earley, Ang, & Tan, 2006; Yoshimura, 2002). A deeper understanding of the dimensions of CQ allows faculty to consider explicitly the types of classroom experiences that enhance each dimension of CQ, as well as the development or modifications of academic programs to ensure students have developed sufficient levels of CQ and the global mindset needed by the time they graduate from their postsecondary program and enter the professional world.

Cognitive CQ involves learning about the norms, practices, and values of different cultures and how those compare to the norms, practices, and value system of other cultures. (Crowne, 2008; Dyne et al., 2009; Maznevski, 2008; McCrea & Yin, 2012). To perceive cultural differences and understand how they work, individuals need to consciously attend to cultural differences, an approach referred to as mindfulness (Egan & Bendick, 2008; Thomas, 2006). Mindfulness requires more than knowledge about cultural differences; it requires an individual's interest in, and attention to, how cultures compare and differ.

Metacognitive CQ involves awareness, planning, and monitoring (Crowne, 2008; McCrea & Yin, 2012). It refers to an individual's ability to "plan an appropriate strategy, accurately interpret what's going on in a cross-cultural situation, and check to see if [one's] expectations are accurate" (Dyne et al., 2009, p. 7). To develop this type of intelligence, individuals need to prepare ahead for the cross-cultural encounter so they can anticipate how to approach the situation (McCrea & Yin, 2012). Constant monitoring of the planned strategy during the interactive exchange is a necessary element for high metacognitive CQ (Dyne et al., 2009).

Motivational CQ refers to an individual's interest and desire to learn about other cultures (Ang et al., 2007) so that successful interethnic encounters can happen (Earley et al., 2006). High motivation will cause persons to pursue opportunities for cross-cultural encounters and exchanges. Perceived success in encounters will trigger greater motivation that will, in turn, lead persons to pursue future opportunities for cross-cultural encounters (McCrea & Yin, 2012). When encounters are perceived as not as successful, high motivational CQ will help a person transform that experience (Lovvorn & Chen, 2011) and channel it to a worthwhile learning experience able to impact that individual's global mindset (Earley, 2002).

Behavioral CQ is an individual's ability to recognize what constitutes appropriate behaviors in a cultural situation and to adapt his/her verbal and nonverbal behaviors so that interactions with people from other cultures and languages can succeed (Ang et al., 2007; Lovvorn & Chen, 2011; McCrea & Yin,

2012). The ability to act appropriately in a different cultural context (Thomas, 2006), to adjust to different cultural situations (Crowne, 2008), and to engage in effective interactions with individuals from different cultures (Dyne et al., 2009; Peterson, 2004) are critical elements in an individual's capability to engage in successful interethnic exchanges (Yoshimura, 2002).

Cultural intelligence has been associated with emotional intelligence (EQ) in the literature (Dyne et al., 2009; Maznevski, 2008). EQ is defined as an individual's "ability to lead and interact with effective emotional sensibilities" (Dyne et al., 2009, p. 2). EQ then allows individuals to regulate their emotions and that of others' so that decisions can be made on the appropriate behaviors for a given interactive exchange (Gullekson & Tucker, 2013). CQ actually represents a step beyond EQ (Peterson, 2004).

Postsecondary Experiences That Have Been Demonstrated to Enhance Specific Domains of CQ

Cognitive CQ

Developing cognitive CQ constitutes the first step toward developing a global mindset (MacNab, 2012; Thomas, 2006). Pedagogies that increase student self-awareness, that increase awareness and knowledge of behaviors and practices in different cultures, and that allow for comparisons of self and of individuals who represent diverse cultures stimulate cognitive CQ (McCrea & Yin, 2012). Cultural awareness and knowledge can be raised through classroom discussions and instructional materials related to the particular discipline that portray the beliefs, values, and norms of different cultural groups and how those help differentiate one group from another.

Metacognitive CQ

Postsecondary classroom experiences that target metacognitive CQ are those engaging students in face-to-face cross-cultural interactions (McCrea & Yin, 2012) and stimulating reflection about what one expected from the encounter and the actual result of the encounter. In other words, these are experiences that lead students to question their cultural assumptions and stereotypes toward other groups (MacNab, 2012). It is through face-to-face, interactive encounters that individuals develop stronger self-awareness and reasoning skills (Lovvorn & Chen, 2011) and the ability to be flexible and modify behaviors in response to a changing situation (Crowne, 2008; Thomas, 2006). For example, place-based education (William & Nagy, 2012) involves incorporating the local community, its history, culture, and people into the classroom content. Through local guest speakers, field trips, and lessons

around local topics, college students can learn about the local heritage, history, and cultures and can then reflect on their own cultural identity in light of the community's culture and place themselves in that community. Infusion of place-based education in multiple courses within a single program will allow for broader coverage of regions and cultures and more in-depth investigation of variability of behaviors and practices in different communities and in different parts of the world.

Additional examples of experiences that lead to metacognitive CQ are interviews and tutorial experiences with individuals from different cultures and who speak different languages (McCrea & Yin, 2012). Reflection by students through journals or whole-group discussions after the cross-cultural encounter are essential because they allow students to synthesize the success of their experiences, better comprehend cultural assumptions and preferences, and develop a deeper understanding of cultural norms (McCrea & Yin, 2012).

Motivational CQ

Motivational CQ can be increased by instructional strategies that include the personal and professional experiences of the instructor, the personal experiences of the students, curricular activities with a focus on the global context, and student involvement in community-based activities (Billings, 2006). Classroom projects involving discipline-specific research with a focus on cultural differences will help broaden college students' understanding of culture, "unteach" biased information, and stimulate reflection on the roots of discrimination, stereotyping, and prejudice (Egan & Bendick, 2008), with the purpose of generating the desire for further investigation into situations involving cultural diversity.

To build motivational CQ as well as the other three dimensions of CQ, it is critical that numerous opportunities for global learning, global exploration, and contacts with individuals different from students be intentionally infused throughout an academic program to raise students' awareness of cultural differences, increase their interest in the diversity of cultures, and better prepare them for immersion experiences such as those through international internships or study-abroad experiences (Gupta & Govindarajan, 2002).

Behavioral CQ

Classroom experiences that promote cultural inquiry can help college students identify whether appropriate behaviors have been selected in cross-cultural instances (Crider, 2007; Thomas, 2006) or whether specific behaviors should be inhibited or modified (Earley & Ang, 2003). Examples of pedagogies that involve cross-cultural inquiry include

classroom staged cross-cultural encounters where students role model and then reflect on and modify their behavior prior to or after a real encounter, analysis of recorded interviews between students and members of a different culture, reflective journals on the appropriateness of verbal and non-verbal behaviors when interacting with individuals from a different cultural background, or any classroom experience that exposes students to a different culture through an interactive exchange and that offers opportunity for reflection and evaluation.

Postsecondary Educational Experiences that May Lead to CQ

There is relatively limited research substantiating which teaching practices enhance CQ; indeed, the report by Dezure et al. (2014) recognized the need to increase postsecondary students' cultural intelligence, but presents no recommendations on how to address that need. This section presents some experiences that, based on our understanding of CQ, may lead to CQ. Experimentation with, and assessment of, these experiences can lead to the establishment of effective strategies for developing CQ.

In-Class Learning Experiences

Creating a classroom environment that enhances CQ. Identifying one's self-CQ is the first step toward teaching with cultural intelligence. Faculty must define their own level of cultural knowledge and evaluate their feelings, behaviors, and attitudes during cross-cultural encounters. The Cultural Intelligence Scale (CQS; Ng et al., 2012) is a reliable, self-report instrument faculty can use to test their potential for cross-cultural success. Closer attention to one's own cultural predispositions and values will contribute to a level of sensitivity and mindfulness essential to the development of self-CQ (Goh, 2012; Montuori & Fahim, 2004) and help create a more welcoming and inclusive context for learning (Milner, 2011).

Faculty must also assess the cultural environment of their own classrooms by considering the diversity of student learning styles (Goh, 2012), students' cultural histories, expectations and behaviors, and the experiences students bring to the classroom. Consideration of these variables will lead to instructional practices that are more culturally sensitive.

It is imperative that faculty create an academic context where students are given voice and are encouraged to participate more fully (Lave & Wenger, 1991; Milner, 2011), apply culturally sensitive modes of communication and gestures, and display a positive attitude toward diversity. It is through modeling such behaviors that faculty members are likely to inspire in

their students the types of behaviors necessary for the development of intercultural competence and cultural intelligence (Goh, 2012). "Teachers with high CQ learn how to adapt their teaching, assessment, and feedback strategies when working with students from various cultural backgrounds" (Livermore, 2011, p. 10).

Providing practice with CQ-enhancing behaviors through strategic assignments. Instructional assignments that address the CQ dimensions include local travel to areas where a language other than English is spoken, the use of culturally focused cases and contexts within the specific discipline that stimulate in-depth thinking, perspective-taking, comparison, and appreciation of other cultures, and the inclusion of expected professional behaviors as part of the course requirements.

Professional behaviors highlight expectations students should meet toward developing healthy interactions with individuals in the group. For healthy interactions to emerge, students need to be attentive to the quality and appropriateness of their oral and written communicative approach, including e-mail messages, so they are not perceived as impolite or inappropriate. To be culturally intelligent, interactions also depend on students' ability to work collaboratively and cooperatively; to respond to and adapt to changing situations; to respect individuals' values and opinions; to exercise mature judgment, poise, fairness, and self-control.

Fostering culturally intelligent communicative exchanges in the classroom. Learning is a process that depends on the social and cultural contexts of all individuals involved in the process (Ramis & Krastina, 2010). As such, knowledge of each cultural community represented in the learning context is essential, if the goal is effective exchanges between teachers and students and among students (Lave & Wenger, 1991). Faculty are in a unique position to promote culturally intelligent communicative exchanges with and among students (Jaschik, 2009). Their frequent interactions with students give them first-hand opportunities to assess the quality of the communicative exchanges in the educational context and to examine the campus climate. Goh (2012) emphasized that "to be a key globalization player, teachers must teach with cultural intelligence" (p. 396). Faculty need to emphasize culturally intelligent communicative skills where the participation of all is encouraged so that students can exercise their ability to work together and use different communicative approaches and perspectives for a common goal (Ramis & Krastina, 2010). For example, the addition of a pause-predict-ponder strategy in an online instructional design is effective in leading students "to engage in productive cultural reflection, and . . . enhancing multiple measures of cultural learning" (Ogan, Aleven, & Jone, 2009, p. 285).

Culturally intelligent activities, such as the one described above, not only help develop the four dimensions of CQ, but also give individuals the intercultural communicative skills they need to function effectively in contexts characterized by cross-cultural encounters.

Although the literature on the kinds of communicative exchanges that may lead to CQ is still limited, a few studies attempt to answer this question. Milner (2011) showcases the mindset and the communicative classroom practices that contributed to creating a culturally sensitive learning experience for students. His research highlights three recurrent themes regarding the instructor's mindset in promoting cultural intelligence in the classroom: building and sustaining meaningful and authentic relationships with students, recognizing distinct identities among students, and making the classroom a "communal affair" (Milner, 2011, p. 76) that emphasizes collaboration and responsibility among all in that educational context. Among the communicative classroom practices observed, Milner (2011) highlighted the teacher's concern to build and sustain relationships with students by taking interest in student's individual needs, addressing tensions, and creating accommodations when needed. Milner (2011) defined the instructor's role in the study as the "other father" (p. 82) and pointed out that approaches that resemble parental roles are effective in contexts characterized by cultural diversity.

Making culturally intelligent communicative skills "the central axis of learning" (Ramis & Krastina, 2010, p. 245) in postsecondary education helps students develop advanced ability to problem solve, acquire higher solidarity, become more intellectually developed, and exhibit greater ability for intercultural communication and understanding.

Enhancing cultural judgment and decision-making. Enhancing college students' ability to evaluate cross-cultural situations and engage in decision-making is a powerful strategy for developing cognitive and metacognitive CQ (Ang et al., 2007). By providing students with cross-cultural scenarios (Cushner & Brislin, 1996), such as those in which students are given a hypothetical situation where they make a rule constraining individual's behaviors by majority decision (Kinoshita, 2006) and explain their rationale, faculty stimulate students' cultural judgment and prediction, and observe students' decision-making skills (Ang et al., 2007; Crider, 2007). In addition, experiences that require students to modify and adapt their behaviors and decision-making skills to meet the changing demands of the environment are particularly relevant in improving motivational and behavioral CQ.

The study conducted by Pulakos, Arad, Donovan, and Plamondon (2000) on adaptive performance

maintains that individuals today must function effectively in different cultural contexts and with individuals whose values and orientations are distinct. In their study, Pulakos et al. (2000) developed a taxonomy of adaptive job performance and used it to analyze critical incidents in 21 different jobs to understand, predict, and train adaptive behavior. The results suggest that, to train college students to adapt, requires that they be continuously exposed to situations in their academic classes that reproduce the ones they are likely to encounter in their future jobs. For example, students, throughout their criminology program, would be exposed to a variety of scenarios focusing on cultural criminology to explore the behaviors and dynamics of various criminal subcultures. By considering the networks and connections among individual criminals and criminal events, students will be better able to devise and adapt strategies for crime control and "investigate criminal and deviant subcultures as sites of criminalization, criminal activity, and legal control" (Ferrell, 1999, p. 397). Such job-relevant adaptation scenarios stimulate college students' cultural judgment and decision-making and make them increasingly adaptable and tolerant of the differences and uncertainties that characterize their professional and global contexts.

Promoting personal growth and cross-cultural adjustment. Individuals are often oblivious to their own cultural predispositions until they are confronted with unfamiliar situations or with people different from themselves (Adler, 1975). Becoming culturally intelligent then requires the type of personal growth that results from experiences that ultimately challenge the individuals' beliefs, attitudes and cultural knowledge (Montuori & Fahim, 2004). According to Hall (1959), to be truly challenged, individuals need to be exposed to experiences that cause them to feel shocked due to "contrast and difference" (as cited in Montuori & Fahim, 2004, p. 245), although there are studies that maintain that cultural activities that challenge and confuse students can be problematic (Simonelli, 2000; Sherriff et al., 2012).

A university curricular framework that intentionally infuses educational instances that lead to cultural confusion or disorientation can offer a context for personal growth and cross-cultural adjustment (Montuori & Fahim, 2004). For example, an instructor could arrange for a portion of the class to be conducted in a language unfamiliar to the students and then engage them in discussion about the feelings triggered by the experience. By introducing confusion and cultural disorientation, conditions are created for the development of metacognitive, motivational and behavioral CQ which will, in turn, better prepare students for full immersion in an international experience because of the greater cross-cultural

interactional and psychological adjustment (Ang et al., 2007; Beyene, 2007) students will have gained from those puzzling experiences.

Out-of-Class Learning Experiences

Community engagement experiences. Community engagement activities can provide opportunities for interactive, first-hand encounters and help promote all four dimensions of CQ, especially behavioral CQ. Community engagement activities are those that are part of the academic curriculum aimed at engaging students in the community (Zapata, 2011). There are multiple ways through which community engagement experiences can happen, as long as service is provided to the members of the community through direct contact. Direct contact with individuals from diverse groups will allow for cultural exposure and, consequently, greater cultural understanding.

Out-of-the-classroom activities help increase awareness of differences in interests, values, and views; promote verbal and social gains; reduce prejudice; and increase personal acceptance (Kuh, 1995; Tutt & McCarthy, 2006). Community engagement activities have become one of the most effective ways of promoting cultural understanding and competence in college students (Zapata 2011). However, such activities tend to be more effective when they are tied to course objectives (Sedlak, Doheny, Panthofer, & Anaya, 2004). An example might be connecting the objectives of several environmental science courses to the development of a sustainability plan for a local impoverished area in the community.

International internships and study abroad programs. Experiences that immerse students in another culture are the ones most likely to develop an individual's CQ (Crowne, 2008; Gullekson & Tucker, 2013; Lovvorn & Chen, 2011). In the past decade, many studies have been conducted on the value, effectiveness, and impact of international internships and study abroad programs on students' cultural awareness and cultural intelligence (Gullekson & Tucker, 2013). Studies by Black and Duhon (2006), Anderson, Lawton, Rexeisen, and Hubbard (2006) and others leave no doubt that international immersion experiences are powerful in enhancing students' CQ as well as promoting overall intercultural growth. Furthermore, the longer individuals interact with the local population and participate in their everyday life while abroad, the higher the levels of CQ these individuals will acquire (Crawford-Mathis, 2010; Crowne, 2007; MacNab, 2012). Therefore, they should be part of a student's academic program whenever possible.

However, studies on the impact of international work experience on CQ (Crowne, 2008; Shannon &

Begley, 2008; Tay et al., 2008) have shown that these immersion experiences predicted mainly cognitive (Crowne, 2008; Tay et al., 2008), metacognitive and behavioral CQ (Crowne, 2008), but not all four intelligences simultaneously (Ng et al., 2012). There is limited research on which experiences lead to the development of all CQ dimensions in an international internship or study abroad context.

According to Gullekson and Tucker (2013), emotional intelligence is a predictor of students' intercultural growth in study abroad programs, suggesting that "higher levels of emotional intelligence were associated with greater reductions in ethnocentrism and intercultural communication apprehension, as well as greater increases in international awareness" (p. 173). Therefore, infusing instructional strategies that increase EQ throughout students' academic experience should allow them to experience greater cultural adjustment and greater development of all dimensions of CQ during international immersion experiences (Gullekson & Tucker, 2013).

Recommendations for Teaching Toward Cultural Intelligence

Although it is important to recognize that both in-class and outside-of-class initiatives with a cross-cultural focus are increasing in postsecondary settings, consideration of the quantity and quality of those initiatives is imperative in determining the extent to which college students are developing all four dimensions of CQ (Ng et al., 2012; West, 2012). The existing literature on experiences that lead to CQ suggests that single cross-cultural experiences (Crowne, 2008; Lopes-Murphy, 2013; Lovvorn & Chen, 2011) or experiences not tied directly to course goals (West, 2012) do not lead to higher levels of cultural intelligence. College students benefit from a variety of cross-cultural experiences that are purposefully infused throughout their academic studies to allow for ongoing and gradual development of CQ. The more college students engage in CQ-focused activities, the greater their cultural understanding and future engagement in cross-cultural experiences will be (Crowne, 2008). Nevertheless, the quality of those cross-cultural experiences is a determining factor in stimulating future engagement. Poorly organized experiences or experiences disconnected from the goals of a student's academic career may lead to unsuccessful cross-cultural experiences or may inhibit future engagement in such activities (Earley & Ang, 2003). While the definition of a "quality program" varies among researchers, the experiences below have shown to be effective in promoting and emphasizing the dimensions of CQ in postsecondary classrooms.

To develop college students' CQ, there must be consensus among faculty that initiatives toward CQ must go beyond sporadic cross-cultural events on campus or identified courses in foundational studies or in the humanities. It is critical that the CQ philosophical framework be emphasized across campus (Ng et al., 2012; Goh, 2012; West, 2012), adopted by all disciplines, and infused in all teaching contexts (Ramis & Krastina, 2010; West, 2012) so that students develop the skills to function effectively in a global community (Lovvorn & Chen, 2011). Initiatives to increase the global education focus in higher education need to be everyone's responsibility—general education and major. All college students then should engage in a wider range of experiences that focus on a variety of global perspectives and that are intentionally embedded throughout their academic experience (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) so that higher levels of CQ are attained.

Teaching toward CQ should be intentional (Egan & Bendick, 2008). Classroom experiences that emphasize the CQ dimensions must be intentionally infused in course syllabi and tightly connected to the program objectives and/or course goals (Karnyshev & Kostin, 2010) to give students meaningful and transformative learning outcomes essential to their future career. In addition, academic experiences directed toward CQ should be continuous and increasingly challenging (Gullekson & Tucker, 2013) to allow for incremental growth, reflection, and adjustment in behavior to ensure that effective and successful cross-cultural interactions emerge.

Teaching toward CQ should not be discipline-specific (Karnyshev & Kostin, 2010; West, 2012). Ideally, CQ should be a skill emphasized in all postsecondary classes regardless of the discipline (e.g., STEM, humanities, social sciences, applied sciences) or professional needs even in disciplines that may normally be thought of as not addressing issues of culture and CQ. For example, in an engineering program, students can be given a problem to solve in both their own context and in another country where engineers have fewer resources. Not only will students learn about the other culture, but they will also learn how to adapt their approach to a different context.

The rise of diversity worldwide calls for a global mindset by all. Therefore, faculty should emphasize culturally sensitive and inclusionary practices in their teaching and expose students to a variety of diversities and contexts that are related to the discipline. These in-class instructional practices will help ensure that outside-of-classroom experiences, such as community-outreach activities, international internships, or study-abroad programs, will lead students to greater development of metacognitive, motivational, and behavioral CQ (Terenzini, Pascarella, Blimling, 1996)

and greater likelihood for successful cross-cultural experiences.

Teaching toward CQ should emphasize collaborative efforts between faculty with high culture/language knowledge and faculty with high content knowledge (Egan & Bendick, 2008) because designing instruction with cultural intelligence in mind can be challenging. Matching faculty skills and interests will help address that challenge. Partnerships between foreign language faculty and content faculty have been adopted by St. Olaf College, Skidmore College, Trinity University, University of Rhode Island (Davies, Gonzalez, & Kwai, 2013) and have proven to be successful in creating a comprehensive internationalized curriculum that emphasizes the dimensions of CQ. Such collaborative initiatives enrich students' learning experience and allow for access, exploration, analysis, and students' better-articulated responses to the complexities of intercultural exchanges (West, 2012).

Initiatives toward CQ, both in and outside of class, should be assessed continuously so that their impact on students' CQ development can be evaluated (Ng et al., 2012). It is critical that assessment tools be developed to measure the impact of such experiences on students' CQ, growth in CQ over time, and students' ability to function effectively in cross-cultural encounters (Harris, McCauley, & Wright, 2000; MacNab, 2012).

Infusion of culturally intelligent practices in postsecondary education will enable the academic curriculum to become more comprehensively internationalized and culturally intelligent and create the level of learning that will best prepare college students for an intricate global community.

Recommendations for Future Research

There are numerous opportunities for additional research in CQ at the postsecondary level. Empirical research is needed on the types of postsecondary education experiences that lead to CQ and how the quality and quantity of such experiences affect gains in CQ (Ng et al., 2012).

Few studies have empirically assessed the impact of the global education experiences offered in higher education on students' CQ. Methods that systematically assess students' growth in all four dimensions of CQ over time are needed to understand the impact of culturally focused initiatives on students' CQ so that necessary changes can be identified and made. Also, few studies have developed methods for assessing efforts toward the development of intercultural competence among professionals in the postsecondary arena (Franklin-Craft, 2010) and the extent to which faculty members across campus are teaching with cultural intelligence in mind.

Conclusions

Infusing cultural intelligence as a model for learning requires explicit support from the college/university and must be treated as a priority (Jaschik, 2009). This level of support entails going beyond diversity statements, targeted classes or sequences of classes on diversity, and sporadic diversity-focused events on campus. CQ must become the norm and be embedded in all initiatives and practices across campus (Ramis & Krastina, 2010).

Another condition for making a CQ teaching model possible in postsecondary classes is awareness on the part of faculty of their own cultural intelligence level. To infuse culturally intelligent practices in the classroom, faculty must assess their own CQ abilities (Goh, 2012) and recognize the value of diversity in their content area. It is through such recognition that faculty will be able to employ culturally intelligent instructional practices that will better prepare their students to be successful in the 21st century global context (Jaschik, 2009).

Research (Ang et al., 2007) shows that professionals with higher levels of the four dimensions of CQ (metacognitive, cognitive, motivational, and behavioral) have increased effectiveness in meeting performance expectations at work. This relationship suggests that all dimensions of CQ need to be emphasized in all academic programs and systematically infused in all courses of a given program so that college students develop these intelligences gradually and continuously throughout their program, thereby becoming highly culturally intelligent by the time they earn a college degree. However, there is a dire need for empirical, quantitative research that identifies the classroom experiences in a variety of disciplines that have the most impact on students' development of the four dimensions of CQ. In addition, assessment methods are needed to examine students' growth in these dimensions over time.

Postsecondary classroom experiences must systematically expose students to culturally intelligent teaching practices modeled by their instructors and engage students in experiences that gradually introduce them to, and provide practice with, culturally intelligent behaviors. Such exposure and engagement should be part of the overall education of college students and should not be restricted to any discipline (Lopes-Murphy, 2013).

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SOLANGE A. LOPES-MURPHY is a teacher educator trained in foreign and second language education. She grew up in Brazil, where she received her BA in Interpretation and Translation, Portuguese and English. She then moved to the US and received her MA at Radford University and PhD at Virginia Tech University. Her core research includes cultural competence and cultural intelligence, methods of language teaching, and assessment of learning. Dr. Lopes-Murphy's courses focus on language and culture, methodology of teaching, assessment for curriculum development, and linguistics.

Disrupting Islamophobia: Teaching the Social Construction of Terrorism in the Mass Media

Krista McQueeney
Merrimack College

This article presents a critical media literacy technique for teaching about the social construction of terrorism. In a post-9/11 context where the human rights of Arabs and Muslims in the United States and overseas are threatened by drone attacks, profiling, detentions, and hate crimes, educators must not shy away from this issue. I use visual media to engage students with three questions: (1) How do everyday Americans define “terrorism” and perceive “terrorists”? (2) Where do these images come from? (3) What are the consequences for domestic and foreign policy? Using students’ own socialization as a starting point, I challenge them to consider how media representations can have real-life consequences.

The recent hate crime against Sunando Sen—a 46 year old Indian-American man who was pushed to his death from the subway tracks in Queens, NY because he was perceived to be Muslim—is an ugly example of Islamophobia in the United States (Santora, 2012). Unfortunately, it is not an isolated case. Leading up to and following the 9/11 attacks, the human rights of Arabs and Muslims in the US have been increasingly threatened by anti-Muslim rhetoric, airport screenings, traffic stops, detentions, deportations, and hate crimes (Kaplan, 2006; Gottshalk & Greenberg, 2007). Recent reports estimate that the post-9/11 wars have directly caused the deaths of between 174,000 and 220,000 civilians in Iraq, Afghanistan, and Pakistan (Watson Institute for International Studies, 2014). Additionally, the beginning of 2013 was marked by Congressional reauthorization of the National Defense Authorization Act (NDAA), which expanded the U.S. government’s right to detain terror suspects indefinitely and justified secret drone attacks overseas. Under President Obama alone, drone attacks—a controversial weapon of the “war on terror”—are estimated to have killed at least 2,400 people in Pakistan, Afghanistan, Yemen, and Somalia (Bureau of Investigative Journalism, 2014a).

Within such a context, it is crucial for educators to encourage students to develop a critical analysis of Islamophobia and the social construction of terrorism. Yet, facilitating productive discussions of these issues can be a challenge. Many undergraduates—like Americans of all ages—are uninformed about US foreign policy and events in the Arab World (Cassino, Woolley, & Jenkins, 2012). In class discussions, many of my students have stated the belief that women wearing a hijab or veil and airline passengers with Arab-sounding last names must be suicide bombers. Very few of the students I teach followed the events of the Arab Spring, nor were they aware of the United States’ role in supporting dictators like Egypt’s Hosni Mubarak. In addition, practical techniques for teaching about ethnic and religious minorities—especially Arabs

and Muslims—are lacking in the teaching literature (Kaviani, 2007). Taken together, these conditions can make it difficult for instructors to facilitate open and respectful dialogue about Islamophobia and its social and political consequences in our society.

With this in mind, I share a pedagogical technique designed to generate productive, temporally bounded (75-minute) discussions of terrorism in the undergraduate classroom. This approach draws on three distinct streams in the sociological literature: the construction of social problems, racial “Othering,” and critical media literacy. First, I use a social constructionist framework (Best, 2012; Loseke, 2003; Spector & Kitsuse, 1977), which holds that the issues that are defined as social problems (e.g., terrorism) are not objectively given, but are instead a matter of people constructing meanings and interpretations of what *counts* as a social problem. Thus, definitions of social problems change over time and place (Best, 2012). Second, I foreground a critical analysis of racism and the corporate control of mass media. As Said (1997), Shaheen (2001), and Jackson (2010) have argued, the Western media routinely stereotypes Arabs and Muslims as terrorists and racial “Others.” Third, because structured images of Arab and Muslim Others (I intentionally conflate these ethnic and religious categories to reflect popular representations) saturate the corporate-controlled mass media, I employ a media literacy to help students critically interrogate these stereotypes (Steinbrink & Cook, 2003). Critical media literacy is especially useful for cultivating equity and justice among today’s students, who have been immersed in information-communication technology their whole lives but often lack the ability to evaluate information and debunk stereotypes in the media (Considine, Horton, & Moorman, 2009).

The Social Construction of Terrorism

From a social constructionist perspective (Best, 2012; Gergen, 2009; Loseke, 2003; Spector & Kitsuse,

1977), social problems should not be taken for granted as objective conditions that afflict society. Instead, they are analyzed as a process. Social constructionists ask, how and why do people come to perceive that some condition should be viewed as a social problem? From this perspective, terrorism is not a real threat embodied by individuals and groups who can be hunted down and killed. Instead, *terrorism* is constructed through the interpretation of events, the use of claims made up of language and symbols, and the work of claims-makers to attract the public's attention and sway public opinion in support of some interests over others (Ben-Yehuda, 1993; Schmid & Jongman, 1988; Turk, 2004, 2008). Basic to this process is that claims-makers deploy dominant language and symbols that circulate in the culture to construct social problems. Moreover, the issues that are defined as social problems in the real world are products of ideological power struggles (Gergen, 2009).

Today, the mass media plays a leading role in defining terrorism (Jenkins, 2003). For example, reporters and politicians are far more likely to apply the label "terrorist" to foreign-based individuals or groups such as al-Qaeda than to domestic hate groups who murder in the name of political goals such as the anti-choice Operation Rescue or the anti-government Patriot movement (Turk, 2004). Moreover, when enemies of the United States—whether political groups or nation-states—wage politically-motivated violence against U.S. civilians it is often called a terrorist act. Yet, when the U.S. government or its allies inflict similar acts of violence on civilians abroad, it is dubbed an act of retaliation or counter-terrorism (Jenkins, 2003). Thus, it is vital for students to critically assess who is making claims of terrorism and to understand the broader political contexts and ideological struggles in which these claims are being played out in the news and entertainment media.

Although social problems like terrorism are constructed by people, they are not mere figments of our imagination. Once people perceive a problem as real, we may take action in ways that are anything but make-believe. In the words of W. I. Thomas, "It is not important whether or not the interpretation is correct—if [people] define situations as real, they are real in their consequences" (Thomas & Thomas, 1928, p. 572). The events of September 11, 2001 led to an elevated risk perception that terrorists will target the United States (Huddy, Feldman, Capelos, & Provost, 2002). For example, public opinion polls indicate that since the 9/11 attacks, Americans have consistently ranked terrorism as one of the most serious social problems facing the United States. A USA Today/Gallup Poll from May 24-25, 2010 revealed that almost a decade after 9/11, Americans still perceived terrorism as the most serious threat to the well-being of the US (Saad,

2010). A poll conducted on the evening of the September 11, 2001 attacks found that 58% of Americans were "somewhat" or "very" worried that a member of their immediate family might become a terrorist attack victim (Gallup, 2013). By March 2012, the level of worry had declined but remained substantial at 35% (Gallup, 2013).

These fears are grossly exaggerated. Statistically, Americans are highly unlikely to be harmed by a terrorist attack. In 2001, car accidents killed over 12.5 times more Americans than did the September 11th attacks (U.S. Department of Transportation, 2002). Yet, insofar as social problems are as much (or more) a matter of subjective perception as they are of objective harm, educators can help students unpack where these subjective perceptions come from as well as their validity.

So where do these subjective perceptions come from? The mass media, with its narrow focus on the exceptional over the ordinary and its lack of international coverage, is the primary source of Americans' knowledge about Islam and Muslims (Council on American-Islamic Relations [CAIR], 2006). In turn, politicians make use of public opinion polls in deciding what problems should take center stage, what policies to support, and what actions to take in addressing social problems. Perceptions have consequences. Thus, a more informed perspective is urgently needed—especially among young people, whose critical thinking skills and cultural awareness will be pivotal in navigating a global society in which the world's 1.6 billion Muslims play an important role.

Controlling Images: The Arab and Muslim "Other"

In her book *Black Feminist Thought*, Collins (2000) identified several stereotypical images of African American women that circulated in the dominant culture, particularly in the mass media. She argues that portrayals of African American women as "mammies," matriarchs, welfare recipients, and "hot mommas" have been used to justify Black women's oppression. Controlling images like these not only reduce marginalized groups to negative caricatures, but they also serve to mark difference and to "stigmatize and expel anything which is defined as impure, strangely attractive precisely because it is forbidden, taboo, threatening to cultural order" (Hall, 1997, p. 237). Since their first encounter with the Arab world, Westerners have cast Arabs and/or Muslims as uncivilized and violent (Said, 1978). These controlling images of Arab and Muslim Others have become further imprinted in the American imagination since 9/11 (Earp, Jhally, Shaheen, 2006). By painting the Middle East as a land of barbarism and tyranny, and

by routinely casting Arabs and Muslims as terrorists, the mass media bolsters oppositions between the civilized and the uncivilized and fosters fear of the Arab Other (Hirchi, 2007). As such, media misrepresentations can be an instrument for advancing political agendas, including war and the restriction of civil liberties.

It is important to note that media effects are never simple or direct (Hall, 1980). Exposure to images of Arab and Muslim Others—even if it is recurring — does not *cause* individuals to commit hate crimes, nor does it compel governments to declare war on Arab nations. Moreover, Arabs and Muslims themselves may appropriate controlling images in order to gain safety, financial resources, and recognition, or to resist inequality (Collins, 2004). Yet, following Jackson (2010), I argue that controlling images of Arab and Muslim Others—while not directly causing individual attitudes or behaviors—reinforce mainstream assumptions of Arabs and Muslims as terrorists. This creates a context in which human rights violations of ordinary Arabs and Muslims within and outside the United States may be seen as acceptable (Jackson, 2010). Thus, even if journalists, politicians, or film producers do not intend to promote Islamophobia, the ubiquitous association of Arabs and Muslims with terrorists in mainstream Western media contributes to negative and stereotypical attitudes toward Islam (CAIR, 2006). In addition, foreign policy decisions such as the 2003 invasion of Iraq have undoubtedly been made easier by a century of images of the Arab and Muslim Other (Shaheen, 2001). Thus, controlling images mask the global political and economic inequalities that produce terrorism (Smelser & Mitchell, 2002) and shift the blame onto so-called innately violent Arab and Muslim individuals.

Critical Media Literacy

According to Considine and Haley (1999), media literacy can be defined as the ability to access, analyze, and evaluate the quality of the media we consume, as well as to create media of our own. Insofar as media images are shaped by social ideologies and have social consequences, critical media literacy can help students interrogate the content of media texts and situate them within the broader contexts in which they are created, distributed, and consumed. One of the most important contexts is the corporate ownership of the Western media (Horn, 2003; Steinbrick & Cook, 2003; Yates, 2004). To understand media effects, students can ask questions like: What are the implications of the media consolidation that has led five corporations to control 90% of the U.S. media (Bagdikian, 2004)? What images of Arabs and Muslims are we exposed to in the

media? What is left out? What individuals, industries or institutions created these images? Who is the target audience? By encouraging our students to be critical consumers and creators of media, critical media literacy can help empower them to become more informed, socially engaged, and politically aware citizens.

With respect to Islamophobia and terrorism, media literacy has been found to reduce students' anxiety about the portrayal of terrorism on television news (Comer, Furr, Beidas, Weiner, & Kendall, 2008). Evidence also suggests that it inhibits the activation of racial/ethnic stereotypes (Ramasubramanian, 2007). The critical media literacy approach discussed here challenges students to consider the sources of their knowledge about terrorism, whose interests these media sources promote, and the evidence upon which these knowledge-claims are based. Moreover, because the corporate-controlled mass media routinely associates Arabs and Muslims with terrorism, it is important for students to consider independent and international media sources in order to develop a more balanced and critically distant point of view. Finally, I provide openings in the lecture for students to create new representations of the Arab world by rewriting lyrics to familiar songs such as the theme song in the movie *Aladdin* (Clements & Musker, 1992), "A Whole New World" (Rice, 1992).

Setting the Stage

I have taught this activity in Social Problems and Introductory Sociology courses at private, liberal arts colleges on the East coast in the US. In my courses, we analyze a cross-section of social problems including school shootings, racism in the media, child abuse, the war on drugs, teenage pregnancy, same-sex marriage, and terrorism. Using critical and social constructionist perspectives, students are encouraged to examine each problem independently as well as the interconnections among social problems (Best, 2012). Throughout my courses, I urge students to be mindful of how we as individuals and communities can change our ways of being "so that we can live more peacefully and productively with others, without exploitation, disrespect, and inequality" (Schwalbe, 2008, p. 207). While this activity was designed for a course in Social Problems, it can be easily adapted for use in any social science or humanities discipline.

I use a multimedia slideshow to organize the lesson on the social construction of terrorism. I ask students to sit in groups of three to five students based on the social constructionist view that students come to deeper understandings by considering multiple viewpoints. This is best achieved through group dialogue (Considine et al., 2009). Guided by principles of critical pedagogy (hooks,

1994; Nieto, 1992) and active learning (Kolb, 1984), I urge students to reach their own conclusions through the analysis of primary and secondary sources including Hollywood films, case studies, news, infographics, editorial cartoons, and music. Insofar as the vast majority of my students are US-born Christians and identify as White, Black, and/or Latino, this activity was primarily designed to challenge the worldviews of non-Arab and non-Muslim students. Yet, I believe it can also be used effectively with Arab and Muslim students. Instructors may wish to remind students that 2010 U.S. Census data indicated that more than 1.5 million Arab-Americans and 2.6 million Muslim-Americans live in the United States (Asi & Beaulieu, 2013; Grammich et al., 2012). Thus, the social construction of terrorism has real implications for people in our classrooms and communities. Most Arab and Muslim Americans are already aware of these harmful images; it is the rest of us who often need to be enlightened.

I designed the exercise with three learning objectives in mind. I want students to be more sociologically mindful of: (1) how Americans, including us, define “terrorism” and perceive “terrorists”; (2) where these images and definitions come from; and (3) what the consequences of these images and definitions are for U.S. domestic and foreign policies, especially racial profiling and the “war on terror.” Next, I discuss the techniques I use to accomplish each learning objective.

How Do We Define Terrorism and Perceive Terrorists?

My first goal is to promote reflection of the definition of terrorism and students’ own perceptions of terrorists. I begin the class by projecting the word **TERRORIST** on the slideshow and asking students: What words and images come to mind when you see this word? Students usually volunteer words and phrases like suicide bomber, Osama bin Laden, 9/11, murder, World Trade Center, and al-Qaeda, and I write them on the board. From the get-go, it is clear that most students associate terrorists with Arabs and/or Muslims.

Second, I ask if anyone knows the etymology of the word terrorist. Most students are unaware of its roots, so I explain that the term originated in the French Revolution’s Jacobin Reign of Terror. It is believed that the label “le terroriste” was first applied to Robespierre and other Jacobin heads of state who imprisoned suspected enemies of the French government without trial and sent thousands to the guillotine. Thus, the term *terrorist* originated in state-sponsored (not civilian) terrorism. It also derived from a European (not a Middle Eastern) context. As with all social problems, terrorism is socially constructed: its definition changes across time and place.

Third, I ask: how do we define terrorism? I give each group a case study from “Defining Terrorism” on the PBS (2002) website. Following standards of the international community, each group is to decide if their case represents terrorism or some other form of political violence. The cases include brief scenarios of the violence in Northern Ireland, Chechnya, Chiapas, South Africa, and the US-based Weathermen Underground. Groups answer the following questions about their case: Do you believe that the use of force was acceptable and justified? What is your view of the response of the state to the group’s use of force? Were they terrorists or revolutionaries? Often students are perplexed by the task of defining terrorism; it is not uncommon for every group to label their scenario “terrorism.” I conclude the segment by reminding students that terrorism is socially constructed, so we should not expect to identify a universally agreed-upon or objective definition. I cite a study conducted by the U.S. Army, which found that over 100 definitions of terrorism have been used by the U.S. government (Record, 2003). The only characteristic that can be agreed upon, according to expert Walter Laqueur (1999), is that “terrorism involves violence and the threat of violence” (Record, 2003, p. 6). This definition leaves enormous room for interpretation. In addition, while war and violence have existed throughout most of human history, terrorism gained public attention as a social problem only recently. Thus, what is defined as terrorism is a matter of *claims-making*: a person or group must convince the general public and public officials that there is a problem worthy of our attention (Best, 2012).

I challenge students to further clarify the definition of terrorism by projecting an Andy Singer cartoon on the slideshow (see Figure 1). I ask the students what is happening in the cartoon and what they think the cartoonist is trying to get at. At first, students shift uncomfortably in their seats. A student may note that it is trying to illuminate the double standard that military bombings are defined as *legal*, while bombings by “shady” individuals are defined as *illegal*, even though both are killing for political reasons. One student said it reminded her of a saying she had heard that “war is the rich man’s terrorism.”

I remind students of the definition that Walter Laqueur offered based on historical research: “Terrorism involves violence and the threat of violence” (Record 2003, p. 6). I ask, “So why isn’t military combat considered terrorism?” Several students have made the connection that whether an act gets labeled terrorism or not has to do with the privilege and power of those involved and those doing the labeling. The cartoon implies that because the military is a powerful institution that mobilizes high-tech aircraft to attack its targets, military acts of violence are

Figure 1
Andy Singer Cartoon Displayed on the Slideshow



Note. ©1995 Andy Singer (<http://www.andysinger.com>).

defined as legal. On the other hand, because terrorists (i.e., individuals wielding remote-control bombs) have less power, their acts of violence are likely to be defined as illegal. I make the case that in the United States, the two social institutions that have the most power to shape what is defined and labeled as terrorism are the government and the media.

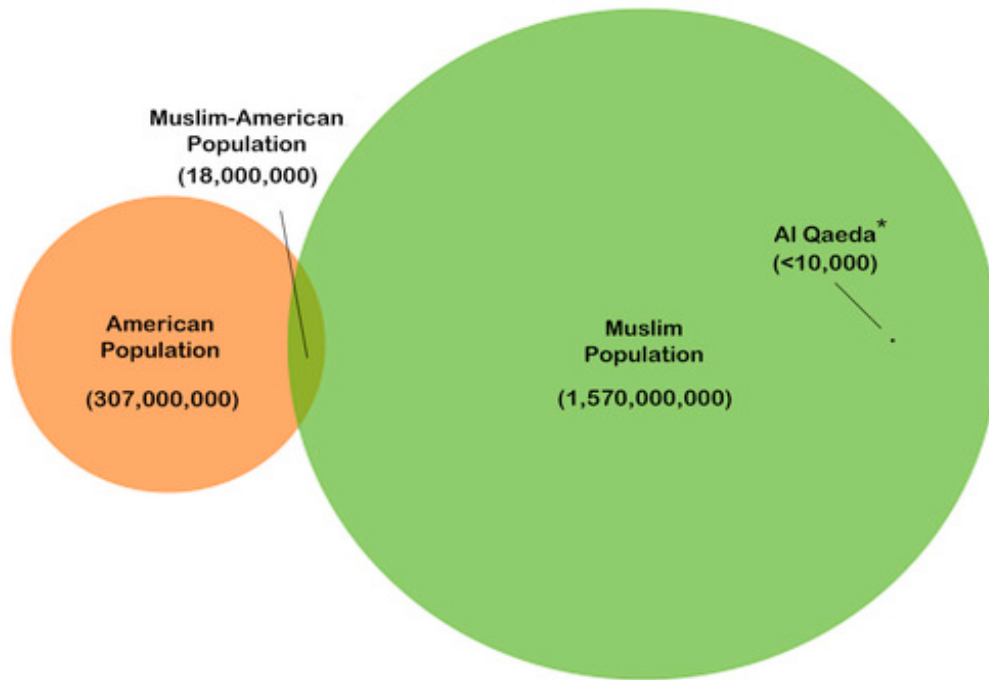
So how do politicians and the media shape potentially life-or-death definitions of what constitutes terrorism and who is a terrorist? Before introducing the next slide (see Figure 2), I remind students that claims-makers—in their efforts to convince people that an issue should be defined as a social problem—not only appeal to our subjective perceptions, but they utilize objective facts as well. I ask, “What objectively-based claims do you think the designer of this infographic is making about terrorism?”

Students may note that in sheer numbers, al-Qaeda represents an infinitesimal percentage of Muslims in the world. In fact, the designer had to represent al-Qaeda at 10 times its actual size even to get it to show up. Students have also made the point that many people in the US stereotype all 1.5 billion Muslims in the world as terrorists, even though al-Qaeda represents less than 1% of the Muslim population. I conclude discussion of this slide by noting that in 2008, terrorist attacks

claimed the lives of 15,765 civilians, including 33 Americans (National Counterterrorism Center, 2009). Although these deaths are tragic, neither the numbers of suspected al-Qaeda operatives nor the number of U.S. civilian deaths seem to justify the intense fear that many Americans harbor about terrorism. Objectively speaking, people in the US are far more likely to be killed by a police officer than a terrorist (Johnson, 2008). So if the threat is not supported by objective data, then what explains public opinion polls indicating that over 50% of Americans believe that terrorism is a very serious or extremely serious threat to our personal and/or national safety (Saad, 2010)? I pose this as a rhetorical question for students to ponder.

Next, I bring up a slide to acknowledge that I have been conflating two distinct social groups: Arabs and Muslims. I note that Arab is a geographical identity, referring to people of Middle Eastern and Northern African descent. Arabs make up only about 20% of the world’s Muslim population. Muslim, on the other hand, is a religious identity: a Muslim is a follower of the religion Islam. Muslims are the world’s largest religion, and they represent about 1/5 of the world’s population. I stress the importance of knowing the difference between these social groups. However, I tell students that because my goal is to encourage them to critically

Figure 2
Matt Osborne Image Displayed on the Slideshow



Note. ©2010 Matt Osborne (www.osborne.ink).

analyze media images that paint an entire nation, region, or religion as an “enemy-Other,” I am using the terms Arabs and Muslims interchangeably. I underscore this point by directing students’ attention back to the list of words and phrases on the board, which they themselves generated about terrorists at the beginning of class.

Where Do These Images of Terrorists Come From?

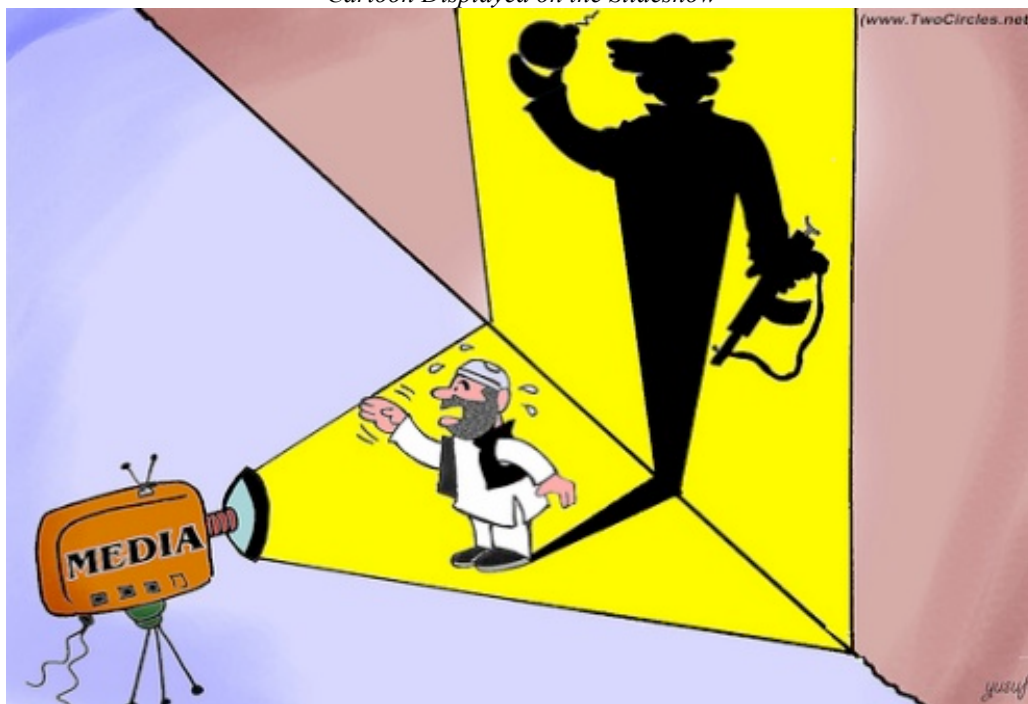
The second learning objective is to consider where these images of Arab and Muslim terrorists come from. I remind students not to feel guilty about having stereotypes: in a media-saturated culture, it is impossible *not* to have stereotypes. Instead, I urge them to be sociologically mindful (i.e., not to uncritically accept stereotypes). To shift the focus to the media, I show another editorial cartoon (see Figure 3). I ask: “What is going on in this cartoon? What is the cartoonist trying to get at?” Students discuss the cartoon in their small groups. Typically students recognize that the cartoonist is criticizing how media portrays the majority of Muslims as terrorists and exaggerates the threat of terrorism. Someone will often make a point like the student who said: “Sometimes the media makes harmless little Muslims look like big bad terrorists.”

These comments provide a segue into Earp et al.’s (2006) documentary, *Reel Bad Arabs*, available through the Media Education Foundation. I begin with Part 1, “Myths of Arabland,” which explores the stereotypes of Arabs as Oriental Others and dangerous villains. Earp et al. (2006) argued that these images of Arab men have dominated cinema from the days of silent films to today’s biggest Hollywood blockbusters. For example, many students grew up watching Disney’s *Aladdin* (Clements & Musker, 1992), which begins with the song “Arabian Nights” (Ashman & Rice, 1992):

Oh I come from a land, from a faraway place
 Where the caravan camels roam
 Where they cut off your ear
 If they don’t like your face
 It’s barbaric, but hey, it’s home.

I ask students if they remember this song and how they feel about the lyrics now. Some students hold on to individualistic views and fond memories of the film; they say things like “you can’t blame the media for everything” or “I’m not prejudiced, and that was my favorite movie growing up!” However, other students may draw on previous class discussions of media effects theories, which hold that the effects of media are

Figure 3
Cartoon Displayed on the Slideshow



Note. ©2009 Yusuf, Two Circles.net (http://twocircles.net/2009sep24/tcn_cartoon_muslims_media.html).

largely unconscious. Such comments can change the whole course of discussion; in one class, a student expressed an earnest concern that children's impressionable minds are being cultivated by racial stereotypes at such a young age. This prompted another student to make the connection to an earlier class reading by Feagin and Van Ausdale (1996), which found that children as young as 3-years-old use racial and ethnic concepts to include or exclude other children. She wondered how much these children had been affected by the media. In a context of multi-million dollar monopoly media institutions targeting children, the media plays a powerful—albeit largely unconscious—role in children's cognitive development and overall socialization.

I then point out that the Disney Corp. agreed to change two lines after a public outcry about the racist lyrics. The last part of the song now goes:

Where it's flat and immense
 And the heat is intense
 It's barbaric, but hey, it's home. (Ashman & Rice, 2001)

I ask students if they think the new lyrics paint a less stereotypical portrait of Arabs. Student almost always say "no." Following Kellner and Share's (2007) call to

help students move beyond simply blaming the media to actively transform and create texts, I challenge them to rewrite the song lyrics in their small groups. Even with only 5 minutes to rewrite the lyrics, students have generated some very creative ideas. One group wrote:

Where the mosques are immense
 And the food is intense
 Their 'peace' is Salam, Shalom.

Next, I remind the class that our goal is to explore how terrorism is socially constructed by claims-makers and image-makers. Importantly, while images of angry, violent Arabs are stereotypes, some Middle Easterners are angry with the United States. In fact, public opinion polls show that there is widespread anger at America throughout the Arab and Muslim world (Kull, 2011).

To explore this, I show a short MSNBC video of Palestinians dancing in the streets in celebration of the 9/11 attacks (MSNBC, 2001). I then show a series of quotes from news reporters who attempted to explain why people in the Middle East would "hate" us. For example, Sean Hannity from *Fox News* said, "The difference, my friends, between Israel and the Arab world is the difference between civilization and barbarism. It's the difference between good and evil . . . the Arab world . . . [has] no soul, they are dead set on

killing and destruction” (Baragona, 2014, para. 7). George Will of the *Washington Post* said, Americans “are targets because of their virtues—principally democracy” (Fairness and Accuracy in Reporting [FAIR], 2001, para. 3). In an appearance on *Late Night* with David Letterman, Dan Rather explained matter-of-factly, “They [Middle Easterners] see themselves as the world’s losers and it drives them batty. There’s no rationality to it. These are crazy people, they are haters” (FAIR, 2001, para. 6).

In small groups, I ask students to analyze these statements as examples of social problems claims-making. How do these claims-makers explain why Arabs and Muslims are angry at the US? What do they leave out? Students typically see that they blame individuals. One student said,

By saying ‘They are losers, they are haters,’ Dan Rather implies that America is the victim. If they are the haters and we are the victims, the US doesn’t have to take responsibility for what we do to other countries.

After each group shares their analysis, I stress that in a media landscape in which Arabs and Muslims are painted as Other, it is not only that the reporters are labeling individual Arabs and Muslims as “haters” and “losers.” It is also that they are painting all Arabs and Muslims as terrorists. At the same time, these claims absolve the U.S. government from responsibility for the very policy decisions—especially the decision to go to war—that give rise to anti-American sentiment in the first place. I tell students we will return to the question of “Why do they hate us?” (Steinbrink & Cook, 2003) at the end of class. Next, we examine the consequences of the media’s Othering of Arabs and Muslims for U.S. domestic and foreign policy.

What are the Social and Political Consequences of These Images?

The third learning objective is to examine the consequences of these constructed images of Arab and Muslim terrorists. According to Schwalbe (2008), being sociologically mindful requires an awareness of unintended consequences. We must consider the latent functions of our actions, and the ideas we use to justify them, not just those that are manifest or intended. Even well-intentioned words and actions can reinforce larger inequalities and harm others—especially those in disadvantaged social groups. Being sociologically mindful, we must examine which social groups benefit and how, and which social groups are harmed and how (Kleinman & Copp, 2009). Additionally, Schwalbe (2008) argued that by seeing connections between individual actions and larger social systems—systems

based on power and privilege—we can attack the *roots* of social problems rather than merely applying band-aids. Using this lens, students are asked to consider how the media’s portrayal of Arab and Muslim Others can lead to unintended consequences for U.S. domestic and foreign policy decisions. Media images are not mere rhetoric; they can set the stage for Islamophobic violence and war.

To explore this, I show another clip from *Reel Bad Arabs* (“Islamophobia”; Earp et al., 2001). In it, scholar Jack Shaheen argued that Western stereotypes of the Arab world prime viewers to feel indifferent to Arab and Muslim suffering, and even to support harmful policies like racial profiling and the War in Iraq out of fear and distrust. Because the stereotypes that pervade Hollywood movies affect viewers on an unconscious level, we are often unaware that they shape our attitudes and/or actions.

In the clip, Shaheen pointed out that the media promotes a racial double standard with regard to terrorism (Earp et al., 2001). For example, when Timothy McVeigh bombed the federal building in Oklahoma City, the mass media did not urge the public to look suspiciously on all young, Catholic white men as terrorists. There were no calls by politicians or law enforcement officials to racially profile whites. In fact, the media immediately blamed Middle Eastern terrorists before any credible information about the Oklahoma City bombing was available.

After playing the video, I ask students for their thoughts on racial profiling. In one class a student said, “Well, Oklahoma City looked like a suicide bombing, so it made sense to point the finger at Middle Easterners. It was a panic situation.” Another student said,

But that’s the point—you have to check the facts instead of jumping to the conclusion that Middle Easterners did it. And you can’t just round up all people in a whole group for the actions of a few individuals.

Another student said, “It has to do with white privilege. White people don’t have to deal with stereotypes and racial profiling because they are the privileged group in our society.” I added that as soon as the media found out it was Timothy McVeigh—a white man—many in the corporate media stopped referring to the Oklahoma City bombing as terrorism altogether. The choices that news reporters make about language may seem trivial, but they can have powerful effects on viewers’ perceptions of who is—and who is not—a terrorist.

In *Islamophobia*, Shaheen also asked viewers to consider whether the invasion of Iraq was made easier by a century of images that paint Arabs as evildoers. I ask students to respond to this. One student disagreed,

noting that the U.S. public was led to believe that Iraq had weapons of mass destruction, even though they did not. Another student said, “Well if you grow up learning these stereotypes, wouldn’t you be more likely to believe that Saddam Hussein and the Iraqis were the 9/11 terrorists? Many Americans still believe that, to this day.” I emphasize that there is no direct correlation between media images and a nation’s decision to go to war. Yet, systematic images of racial Others can create a context in which violence against Others becomes more likely.

If time allows, I show a video clip from al-Jazeera TV about a family who was killed by a U.S. drone attack in Pakistan. Armed drone attacks, a leading tactic in the war on terror, aim to root out al-Qaeda and Taliban operatives. Despite their technical precision, the Bureau of Investigative Journalism (2014b) estimated that between 571-1,224 civilians (“collateral damage”) were killed in the covert drone war in Pakistan, Yemen, and Somalia between 2004 and 2014. The United Nations Human Rights Council (2010) criticized the US as “the most prolific user of targeted killings” (para. 1) in the world. I want to leave the students thinking about the human rights implications of war and terrorism. As such, we return to the question of “Why do they hate us?” One student said, “A lot of times we try to impose our values on other cultures. If you impose your values on me, then yeah—I’m not going to like you.” Another agreed: “If Americans were portrayed like that in their media, I’d be mad as hell too!” Someone else offered, “Maybe they hate us for a very good reason. We are the most powerful country in the world, and we’re killing innocent people in the Middle East every day.” Thus, students can see the unintended consequences that go beyond the U.S. government’s stated intention to protect its citizens at home and abroad. When bombers armed with high tech weapon systems kill civilians, even inadvertently, anger at the United States is an unintended, but predictable, consequence (Steinbrink & Cook, 2003).

The Benefits of Teaching About Islamophobia and the Social Construction of Terrorism

Every time I use this activity in my classes I ask students to provide feedback. The comments I receive are always positive, with students calling it “eye-opening” and “a very interesting way to learn.” Many students have said it challenged them to think more critically about media effects. One student noted: “The visuals made it very clear that Americans have bias (*sic*) attitudes toward things like terrorism because of media influences.” Another student appreciated the chance “to try for one moment to visualize being another race and being stereotyped.” Another said, “It really opened up my eyes to my own stereotypes. I need

to check myself when I get scared by someone wearing a veil at the airport or at the mall.” In general, students report that the activity helps them to apply sociological concepts, feel more empathy, and analyze terrorism through different eyes. I have been especially encouraged by how engaged students are with a topic that can be riddled by “culture of fear” and “us vs. them” discourses.

The pedagogical model discussed here holds some important insights for facilitating productive discussions of controversial issues. The first is that from the first day of class, I provide students with multiple lenses for analyzing social problems. Unlike a debate approach, where students often stay rooted in their own values and beliefs, a social constructionist approach requires them to step out of their preexisting worldviews to consider social problems from different angles. I pair Joel Best’s (2012) text *Social Problems* with theoretical readings and case studies addressing real-world problems such as racism in the media, bullying, the war on drugs, child abuse, and terrorism (several of the readings are from Loseke & Best, 2003). As it is unrealistic to expect students to learn how to discuss emotionally-charged topics like terrorism in a single class period, the readings and class structure give them practice in discussing controversial issues well before the topic of terrorism is introduced (Pace, 2003). One especially pertinent reading makes the point that the media creates panics and hysterias from a few isolated incidents and christens entire categories of people as “innately dangerous” (Glassner, 1999). The use of multiple perspectives helps to promote respectful discussion, as the emotions that can provoke personal attacks (student-to-student or student-to-professor) are muted when students maintain critical distance from an issue (Pace, 2003).

Second, playing the role of a facilitator rather than an expert or authority figure can go a long way in promoting open and relaxed dialogue on uncomfortable topics (Jakubowski, 2001; Lusk & Weinberg 1994). One reason is that many students assume that teachers do not want to be challenged by students; they want to be treated like “experts.” By taking on a more facilitative role, teachers can empower students to speak critically, which can generate new understandings about the social world (Jakubowski, 2001). More concretely, in my class students sit in small groups starting in the first week of class. They quickly become accustomed to looking at me to begin the day’s lesson, and for physical and verbal cues about when to direct their attention from the slideshow to small group discussion to individual activities (e.g., freewrites) and up front again for whole-class discussion. The small groups create a more intimate, relaxed environment for shy students to come to voice, while my facilitation of the whole

class helps to coordinate sharing, to smooth awkward silences, and to temper any unruliness that might arise in the small groups. Additionally, while the students are engaged in small group discussions, I move around the room to check in with each group about their answers to the prompts. Structuring class discussion in this way offers multiple benefits, not the least of which is that it lessens the tendency of one individual or group to monopolize discussion. Not surprisingly, this is considered essential in facilitating productive discussions of controversial topics (Payne & Gainey, 2000; Payne & Reidel, 2002). These pedagogical and conceptual approaches may have helped me to avoid the kind of student resistance to topics like race that has been reported in the literature (Bohmer & Briggs, 1991; Cohen, 1995; McCammon, 1999).

This activity offers students an opportunity to disrupt what Edward Said (1997) called “the last acceptable form of denigration of foreign culture in the West” (p. xii). Yet, it barely scratches the surface when it comes to helping students understand the root causes of terrorism and envision solutions grounded in social justice. Perhaps the biggest strength of this approach lies in its potential to be adapted in length and across disciplines. Critical educators may wish to emphasize a more intersectional analysis by analyzing gendered representations of Arab and Muslim Others. Jack Shaheen (2001) noted that while historically the Western media has portrayed Arab and Muslim women as sexual seductresses, in recent years a new image of Arab and Muslim women as terrorists has emerged. As well, controversies over the hijab and other cultural symbols of Muslim womanhood provide engaging texts for critical analysis and inter-cultural education (Watt, 2012).

Furthermore, educators may wish to incorporate comparisons between corporate media vs. independent media, and/or US vs. international media. By asking students to compare the images and discourses that different media sources deploy when reporting the same event, instructors can help students unpack claim-makers’ ideological and profit motives. For example, instructors can ask students to compare and contrast the language, imagery and symbols, audience, and emphasis of texts produced by corporate and independent media sources. In addition, their consequences can be probed. Who benefits from the corporate media’s version of events, and who loses? Who benefits from the independent media’s version of events, and who loses? Such questions can help students understand how the media frames terrorism through its own ideological filters and commercial interests, while also analyzing the manifest and latent functions of these claims. Finally, educators can engage students in discussion about non-military responses to

terrorism. Students can be assigned reports from independent organizations such as Oxford Research Group (www.oxfordresearchgroup.org.uk) and asked to envision alternatives to the war on terror that are based on peace and justice.

Today’s college students are savvy users of information technology and social media; many turn to the Internet as their only source of news and political awareness. Thus, today’s students represent a fertile audience for alternative and independent media. Yet, most of the students I teach have never heard of international news networks such as Al Jazeera or Al Arabiya; nor are they familiar with independent media such as Democracy Now, Fairness & Accuracy in Reporting, Common Dreams, or the BBC. I encourage them to bookmark these sites on their computers so they can continue to educate themselves about social issues through multiple perspectives and solid evidence-based reporting. Critical media literacy is an excellent starting-point for helping today’s young people deconstruct dominant paradigms, practice participatory democracy, and mobilize technology in pursuit of social justice.

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KRISTA MCQUEENEY is an assistant professor at Merrimack College in North Andover, MA. Her research and teaching interests center on intersectionality, the mass media, and gender/racial violence. Her dissertation was a feminist ethnography of race, gender, and sexuality in lesbian and gay affirming Protestant congregations in the South.

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