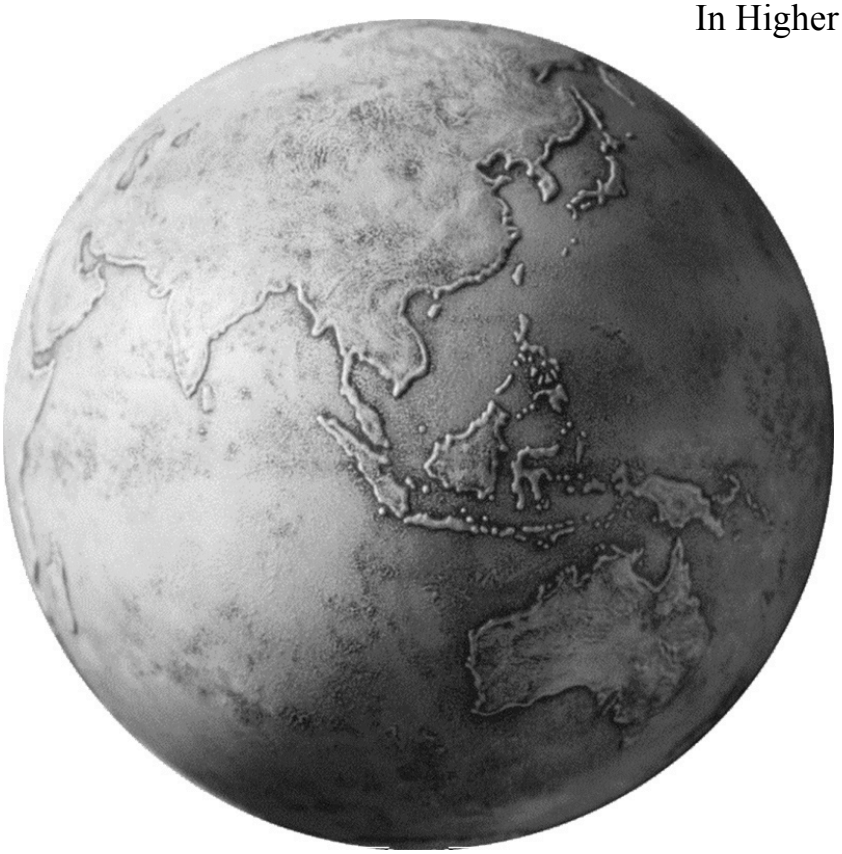
ISSN 1812-9129 Volume 19 • Number 2 • 2007

International Journal of

TEACHING & LEARNING

In Higher Education



A Publication of the
International Society for Exploring Teaching and Learning

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GENERAL ISSUE

Research Articles

Instructional Articles

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 present hard copy of the 2007 journal contents is for reference only.
http://www.isetl.org/ijtlhe/

International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 105-116
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Opening up Thinking: Reflections on Group Work in a Bilingual Postgraduate Program

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As the number of off-shore content-based courses presented by Western universities increases, the issue as to the suitability of elements of constructivist pedagogy arises. This paper reports on mainland Chinese student views of two different types of collaborative work conducted bilingually within a Master of Education program specializing in Educational Leadership. Despite the fact that the literature is divided on the appropriateness of such activity within Confucian-Heritage contexts, initial student evaluations voted the two group activities as the most valuable of all the course components. This encouraged the team to investigate the phenomenon by gathering both quantitative and qualitative evidence relating to the value, the organization and the contribution of individuals in each case. The extent and the nature of the generally positive responses are reported in the paper before a discussion reflecting on what the comparison of "think, pair, share" with "team activities" reveals for future courses. The conclusion is drawn that the study underscores confidence that group work can be very effective in such bilingual, content-based courses in China and elsewhere.

Central to this paper is the question of how mature students, participating in China in an off-shore degree of Master in Education degree, specializing in Educational Leadership, reacted to the use of group work as an integral part of the learning environment. During 2003 to 2004 lecturers were faced with the need to determine the appropriate pedagogy for the delivery of an existing course in China. Despite awareness of the particular nature of the student body and the warnings of others with experience in such programs, the lecturers decided that the collaborative learning activities should continue to be included in line with the home-based course.

It was recognized from the start that this decision to embed two types of basic group work in the form of teamwork and think-pair-share could create some discomfort amongst students and criticism from colleagues at the home and partner institutions. However, it was persevered with, because it was thought essential that students should have maximum opportunities to learn new ideas by being able to participate in small group discussion in the first or main language (L1). Such a decision was considered very appropriate for this group of Chinese educational professionals, who possessed, on average, 14 years' experience in both teaching and leadership, as well as at least three years of higher education study. Despite this extensive background in education, English language proficiency levels were known to be uneven. As a result, students were given opportunities to access their L1 not only during collaborative work but also in bilingual lectures delivered with consecutive interpreting by Chinese academics.

From the outset of the program, staff recognized the need to collect and analyze data on the students' perceptions of group work, the apparent effectiveness of this and other teaching and learning strategies, and any modifications that might be needed to improve learning outcomes. This paper reports on a case study of the first cohort of students, including the views of students and the subsequent reflections of the lecturers. In particular, the authors discuss the apparent success of group work in the bilingual context and comment on the impact that this has had on program design and pedagogy.

Literature Review

Group work is a general teaching strategy where students work together in face-to-face interaction without direct teacher supervision to achieve a common goal. It is used to shift students away from passive learning (Killen, 2003).There is a large number of specific strategy applications. Group work has long been used in North American and other Western educational contexts. Dewey's experiential learning included group learning practices. The growth of research about small group learning in the 1970s contributed to adoption in schools. From the 1990s cooperative learning emerged as a more specialized form of group learning. Here the structure and purpose of the teacher is to develop positive interdependence and individual accountability among group members (Johnson & Johnson, 1999). The growth of group work in schools and universities is supported by the rise of individual and social constructivism as powerful theories of learning.

The main benefit of group work is that students are actively engaged in learning (Freiberg & Driscoll, 2005). Group work activates the students' prior knowledge (Killen, 2003). Face-to-face interaction enables students to build on the ideas of others and to

construct knowledge (Eggen & Kauchak, 2006). They must bring ideas into their own context, learn how to ask questions and interrogate the topic of discussion. An "outside in" learning process develops as ideas are built collaboratively and then internalized. Some students may model the interrogation process. McCaslin & Good (1996) recognize the outcomes of cooperative learning as being active learning, problem solving, student engagement and relationships. However, there are few studies that can establish the most effective strategy applications.

Doubts arise concerning the suitability, in the Chinese context, of the use of group work, whereby groups varying in membership from two to eight students collaborate. This is because both the traditions and current practice of Chinese education conflict with this type of teaching method. Group work is not used frequently, even at tertiary level, because teachers, as knowledge holders and transmitters, are regarded as being the center of the classroom. A dominant role is prescribed for Chinese teachers from the Confucian tradition of education, which states that teaching is composed of transmitting *dao* (Confucian morals), imparting knowledge and resolving doubts. Teachers are expected to be the classroom authority in knowledge and morality, as a result of which students largely depend on teachers for the source of learning material, the correct way of interpreting the material and the right to evaluate the result of students' learning of the material (Cortazzi & Jin, 1996; Hird, 1995).

From the students' perspective, group work as a learning strategy may not be as efficient or as effective as memorization, one of the most popular learning strategies for Chinese students (Ma, 1997). Most teachers and students regard memorization as a short cut to learning for the various examinations, which are often factually based. On the other hand memorization does not necessarily equate to rote learning, where the focus is on regurgitation rather than combining memory work with understanding. As far as most Chinese students are concerned, memorization is a means of internalizing the learning material (Biggs, 1996; Lee, 1996; Leng, 2003).

Despite these considerable constraints on collaborative learning style, two major arguments are advanced in the literature for the use of collaborative learning. The first of these is that the effectiveness of group work in assisting understanding, promoting exploratory talk and questioning and developing higher-order thinking in a variety of programs at tertiary level, is now generally accepted (Litecky, 1992). Chaffee describes active learning, involving interactive teaching, student-led discussions and stimulating projects as lying "at the heart of effective, lasting education" (Chaffee, 1992, p.31).

In his survey of the major influences on the development of this type of approach, Slavin (1990, pp.14–16) discerned two quite separate theories of cognitive development supporting this argument. The first, emerging from the work of Dewey, Piaget and Vygotsky, speaks of the encouragement and assistance provided within the interactive context, while the second relies on the theory of cognitive restructuring or elaboration put forward by psychologists (Wittrock, 1980, p. 397). This process, also termed cognitive rehearsal, is described by Yager, Johnson and Johnson (1985, p. 65) as the ability of all in the group to "orally explain, summarize and elaborate the material being learned". However, over and beyond the cognitive area, attention has also been given to the societal value of cooperative learning. David Jacques, for example, has argued that the high level of cooperation possible in small groups helps students develop essential social and emotional skills, which are so necessary in the modern context. He suggests that the enhancement of student ability "to handle interpersonal problems rather than to avoid them and to do so constructively and creatively" (Jacques, 1991, p. 21) is yet a further part of the overall cognitive benefit.

The second argument in favor of group work, conducted bilingually as in this case, is that those who are less proficient in the language of instruction, benefit from recourse to their L1, when being required to process unfamiliar oral or written text. In using their major language to understand new concepts and/or establish links with existing knowledge in their bilingual groups, students access their content schema (Carrell, 1983) in the major language and thus enhance not only cognition but also overall satisfaction.

Evidence for the value of continuing access to two languages has been provided by recent research amongst international graduate students in the United States. Japanese and Chinese college students, resident in the United States translate into their L1 most of the time (Upton & Lee-Thompson, 2001). Other studies, this time with local American students studying French, showed that preparation for later writing in the L2, involving thinking and drafting in L1 rather than in L2, led to better results (Brook, 1996). Kern (1994) also found that the same type of students used translation constantly, even though they were told specifically that this was not acceptable.

All these studies support the claim that access to the major language in cross-cultural situations is both natural and beneficial. However, this should be viewed as particularly so in this situation, where the students would require any new cognitions to be used largely in the first language environment. The literature, therefore, supports the efficacy of group work conducted in a bilingual mode. This study can be

viewed as breaking new ground in that it describes student reaction to a course, which is distinguished by the fact that it is content rather than language-based. Furthermore it is conducted in China where collaborative learning styles are not the norm. As these principles may increasingly need to be applied in coming years, the study could be said to have significance over and beyond the area of education. It now remains for the students to speak for themselves on the matter of their gains in such a learning situation.

Background to the Study

Negotiations for the delivery of the Master of Educational Leadership between the Zhejiang Education Authority, in China, and Edith Cowan University (ECU), in Australia, were completed in 2002, with the first of a succession of cohorts beginning the course in the following year. As with the home-based course, the teaching of the four units was spread over two years, and involved students in the study of print materials and attendance at a six-day semi-residential program with 35 hours of lectures and workshop activities, including the completion of one of the assessment tasks. Small group learning, a key learning activity for each teaching day, was introduced to complement the other key learning strategy – the sequence of PowerPoint face-to-face lectures delivered in English with the help of consecutive interpreting.

The nature of the group work, which was deliberately restricted to two types in order to enhance acceptance and familiarity, consisted of pair and teamwork with each having its distinct purpose. The think-pair-share learning strategy was mainly used to break up lecture delivery and provide brief "spaces" for adjacent class members to deconstruct, assess and reflect on knowledge directly after it was introduced.

Team learning, however, was quite different. In self-selected groups of seven to ten students, students collaborated on a set task over a much longer period (or even periods), after which they made presentations of group outcomes. Two types of teamwork were used. Firstly, there were tasks undertaken by the team after which students immediately made a presentation within the same session on the theme under discussion. These tasks are part of the sequence of learning for the session. For example, different teams might be asked to take different sections of a reading, analyze the content and compare this with the local situation. Overall, such an activity might last for 30 to 90 minutes, The second type saw the teams collaborating for two to three separate sessions on an assignment task and then making an assessed presentation to the class. Assessment was thus an important aspect of this latter type, while this was not the case with the less extensive team tasks, nor with the think-pair-share activity.

Lecturers returned from their initial teaching experiences with some misgivings about the effectiveness of the teaching and learning processes and were thus very keen to see the results of the first course evaluation. This first questionnaire, designed to elicit response in either Chinese or English, was administered to the 36 students in the first cohort after one unit with each lecturer (see Table 1). Their replies, 90 % of which were in Chinese, rated the usefulness of the different parts of the course on a scale from 1 (Not at all useful) to 4 (Very useful).

Although the table indicates that all aspects of the course were regarded positively, the highest support was reserved for the two group work activities, think-pair-share and teamwork. These results were not only unusual by their very nature, but also by the degree to which they varied from the next most popular strategies. Think-pair-share was shown to be significantly more useful than teamwork and the latter in turn was ranked significantly higher than the study guide (0.05 level of significance by paired sample t-test). This overall trend was confirmed by findings from an open-ended question, which asked students to identify what they liked most about the teaching program. However, this time the favorite was teamwork with 47% support, individual sections of the course 19%, case studies teaching 17% and think-pair-share 14%.

As a result of these unexpectedly positive results in relation to group work, further investigation was undertaken. It is the findings of this further investigation that are the main focus of this paper. A second questionnaire, administered at the end of the third of four units taught by ECU, was designed specifically to elicit information about why the two collaborative strategies had proved acceptable to the students and what sorts of activities were typical of each. Responses to the first questionnaire informed the design of the second one. In particular, the questionnaire format was altered to obtain rankings in place of ratings in an attempt to avoid the normally complimentary nature of the latter. Responses to open-ended questions in the first questionnaire informed the design of some of the questions in the second questionnaire, providing alternatives from which the

TABLE 1
Value of Course Components

Course Components	M	SD
Think-Pair-Share	3.81	0.40
Team Activities	3.63	0.49
Study Guide	3.31	0.47
Readings	3.23	0.40
Individual Assignments	3.22	0.55
PowerPoint Presentations	3.19	0.40
Exam Questions	3.03	0.41

students could choose. At the same time opinions were sought to allow for crosschecking of quantitative and qualitative data. Findings from this second questionnaire form the basis of the remainder of this case study, which gives the views of the Chinese cohort.

Results

Findings concerning the two types of group work, teamwork and think-pair-share are provided. In particular we discuss the perceived value of each activity as indicated by rankings, as well as opinions from open-ended questions about organization, effectiveness and suggestions for improvement. Examples of team tasks include:

1. Prepare a concept map of leadership based on the lecture materials and prior knowledge.
2. Read a particular section of the English reading and prepare a summary of it for the class. Different sections are allocated to each team.
3. Investigate the "school improvement process" and incorporate understandings for a 15-minute presentation to the class using PowerPoint or a wall chart.

Value of Teamwork

Students were asked to rank nine statements concerning the value of teamwork. Table 2 shows the responses and the mean rankings of these.

Analysis of student opinion given in response to the open-ended questions (see appendix) provides backing for these rankings. The majority of comments support the deepening of understanding of the unit and the opportunity to exchange ideas and learn from others. However as the next most evident attribution of value was the effect of teamwork in opening up new ideas and providing inspiration, it could be said that the qualitative section allowed for less pedestrian response than the rankings. This was because it produced signs of appreciation that group members were able, in this way, to not only deepen understanding, but also to add to it. Only one group member took a contrary view to these in commenting that teamwork was a waste of time.

Teamwork spaces were useful for:

- "Pooling the wisdom of the masses and obtaining benefit from others."
- "Exchanging views, learning from each other, intensifying collaboration, rearranging the resources, inspiring each other, and opening up thinking."

Students also applied ideas to their own situations by:

- "Exchanging ideas by relating to our own working experiences; put forward my own view by integrating my own area and my own working unit."
- "Relating to our own experience, we can understand the unit better."

These expressions of pride suggest teams function as a space for the construction of a professional identity in the classroom. Traces of this belief can be found in the following:

- "It can ignite the sense of honor of the team."
- "Teamwork cultivates a collaborative spirit."

Pacing and timing emerged as concerns in response to an item about improving effectiveness.

- "Teachers should control the time of the team activity."
- "Reasonable time allocation."

TABLE 2
Ranking of Value of Different Aspects of Teamwork

Statement	Mean ranking
Making sense of the course work	2.8
Working together to answer the question which was asked	3.3
Listening to the views of other members of your team	4.0
Translating the English	4.2
Exchanging ideas about leadership	4.8
Exchanging work experiences	5.3
Getting a chance to understand the readings	5.5
Negotiating the organization of the team work (roles, work allocation…)	6.6
Getting to know the other team members	7.7

TABLE 3
Percentage of Students Ranking Particular Team Work Activities as One of Their Three Most Usual Roles

Group Roles	%
Expressing your own opinion	91
Listening to the discussion	68
Asking questions to develop your own understanding	56
Keeping the group focused on the task	18
Presenting the group's work in the class	15
Answering questions for others	12
Leading the group	12
Translating the English for others	12
Summing up, bringing the discussion together	9
Mediating between group members	9
Explaining the course work to others	6

Students also believed that teamwork was not always as efficient as it might be because the focus shifted from the prescribed topic. Recommendations were that teams should

- "Ignore anything irrelevant to the unit."
- "Identify the main question; exchange must be about the main subject; keep the group's work focused on the task."

Suggestions were also made about the nature of the work being undertaken and that the lecturer should give sufficient specification for the task, making absolutely clear

- "The theme of the discussion."
- "The requirement of the task objectives and the time limit."

A third of the group favored a stronger emphasis on the inclusion of typical cases drawn from Australia and elsewhere.

Organization of Teamwork

Answers to the several open-ended questions (see appendix) in this section drew very positive comments. The majority of students expressed satisfaction with team composition in terms of number (76%) and its advantages such as diversity of group membership in terms of age, gender, experience and position (78%). A typical comment, offered by a team member, was that, "People with different ages and different genders have different experiences, so these help with understanding the question."

Despite the fact that students opted to form their own groups, it appears that caution still needed to be exercised about the impact of power and status differences in relation to discouraging participation by some participants. While the instructional staff was aware of this issue, they were not in a position to monitor the effects because of the language barrier (neither spoke Mandarin). Only a small number of students raised the issue and then only obliquely.

- "The speakers should not be limited to a small number. Everybody should be given an opportunity to speak up."
- "Group dynamics should bring into play everyone's initiative, and then everyone can participate actively."

A question on how the group managed differing views evoked comment indicative of both public and private responses. The most common of the overt responses mentioned was to persevere with further discussion and negotiation, while others were content to describe the situation as involving the mere exchange of ideas. The other strand evident was that group members would resort to private reflection on the different points of view expressed.

Contribution of Team Members

Aspects relating to the contribution of individual members within their team were also canvassed in order to gain an indication about how each student viewed these group learning strategies. In the first place, students were asked to rank the roles they took in the group from "most usual" to "least usual", and to mark with an (x) those roles that were not applicable to them. The table below shows the percentage of students assuming the various roles, when those roles had been ranked in their top three most usual roles.

In interpreting these data we cautiously use the frequency with which an activity is highly ranked as an indicator of its relative importance to that individual.

TABLE 4
Percentage of Students Ranking Activities as One of Their Top Three Choices During Think-Pair-Share

Think-Pair-Share Activities	%
Making sense of the course work	88
Translating the English	45
Exchanging ideas about leadership	45
Exchanging work experiences	39
Asking questions about the course work	36
Answering the question which was asked	24
Getting a chance to read the Chinese version the study guide	12
Getting to know the other person	3
Getting a break from listening to the lecturer talking	0

This interpretation takes into account the observed behavior of the students during the teamwork, data from earlier surveys, and the self-reported disinterest in taking time out (see Table 4 and related discussion).

It is evident that the most important aspect for group members is *expressing your own opinion*, *listening to the discussion*, and *asking questions to develop understanding*. By contrast, *answering questions for others* was rated as a much lower priority. Consistent with this, the three highest ranked teamwork activities had at least 97% of students participating in this activity.

In addition, two activities had bimodal distributions, each with identifiable groups of students at the opposite ends of the participation spectrum: at one end, the activity was a priority, at the other end were a group who did not participate in the activity. These were *leading the group* and *translating English for others.* The data are interpreted as confirming that these were specialized responsibilities of a small number of students. In each of these activities, 14% of those participating ranked the activity in their top two, whilst 41% ranked it in their bottom two roles, and at least 30% of students, did not participate at all in the activity. It is also interesting to note that there was a correlation of 0.6 between students' responses to these items, suggesting that English capacity was a factor in determining the leadership roles in the groups.

When the focus moved to comment on other members of the group, responses were more varied. Students were asked to "Describe the characteristics of the people who contribute most to the group discussion". According to the answers, those who contributed most to the group possessed not only certain intellectual characteristics in terms of their wide experience, their special insights and understandings, organizing ability or English language skill, but also appealing personal qualities such as enthusiasm, seriousness of approach, humor, courage and helpfulness to others.

Think-Pair-Share

Think-pair-share activities were used by the lecturers within the PowerPoint presentations as a means of ensuring engagement and further development of understandings. Normally occupying around fifteen minutes of class time, these were created when the lecturer assigned a short discussion topic, such as the following examples:

- What do you understand by the concept of "parallel leadership"? To what extent does this form of leadership exist in Chinese schools?
- What symbols would you use for school leadership in China (a compass, a book, an ear)? How could you apply these in your schools?

Value of Think-Pair-Share

When students were asked to rank nine items according to how they best described what actually happened in the pairs, 88% of the students ranked making sense of the course work in their top three choices (Table 4). The next two most frequent activities were translating the English and exchanging ideas about leadership. Over half the students ranked getting a break from listening to the lecture talking as their lowest choice and an additional 20% ranked this as not applicable.

As with the ratings for teamwork, there was strong agreement as to the most important aspect of think-pair-share work, and lower levels of agreement for other activities. Comments of a qualitative nature related to think-pair-share were also gathered for triangulation on this central question. As found in the ranking section, the most frequent comments about value relate to making sense of the course with the exchange of ideas and experience being very similarly rated. Translations of typical responses in the rest of this section illustrate the sorts of ways students obtained help from think-pair-share.

Specifically, the think-pair-share strategy created opportunities to assess the meaning of key knowledge or issues at the time of exposition.

- "Think-pair-share created opportunities in lectures for students to deconstruct, and assess the meaning of key knowledge or issues at the time of exposition."
- "A proper use of think-pair-share facilitates students understanding the content of learning, and also promoting interpersonal relationships."

Some students recognized the potential of think-pair-share for the construction of new knowledge using cooperative learning and reflection.

- "By helping each other and learning from each other, we can be inspired to open up thinking and can make progress together."
- "By pair work, I can learn what I haven't thought of."

Often the most intense and most animated sharing related to workplace application of thinking about the content of the unit.

- "It's a very good way for students to share the different ideas and experiences, so as to broaden their insight."
- "Because we have different experiences and different professional majors, we have different views on the unit, on its conclusion and on its background materials in the unit. Pair work enables our exchange and exploration of these [opinions]."

Despite the efforts of the interpreter, a constant challenge for most students was keeping up with unfamiliar English language words and expressions in the PowerPoint slides and lecturer talk.

- "It's helpful when we encounter some difficult content or concepts and the language barriers."
- "Because we have different English proficiency levels, pair work enables us to consult and make enquires."

For some students, think-pair-share was also an opportunity to develop a professional relationship.

- "It facilitates the understanding of the unit and facilitates understanding my partner."
- "A proper use of pair work facilitates student understanding of the content of learning, and also the promotion of interpersonal relationships."

Organization of Think-Pair-Share

In relation to suggestions about the improvement of pair work effectiveness, one-third of the students needed greater clarification of the question or topic set for discussion, and one quarter felt that greater guidance concerning and control of timing should be available. A somewhat smaller group was concerned about how the pairings were determined. However, within the advice about how the groupings could be improved, no consensus emerged. A few made the suggestion that in the future results from the activities should be collected and discussed during lectures.

Comparison of the Value of Think-Pair-Share and Teamwork

Comparable data to that which was reported in Table 4 for think-pair-share work were collected for teamwork. Six of the nine items were held common to the two sets of questions, as shown in Table 5. A study of these six items provides additional insight into the way in which the think-pair-share and teamwork functioned. There was considerable commonality between the two sets of data, as revealed, in particular, by the three most commonly chosen activities.

Making sense of the course work was the most important function of this work, with 88% and 76% of students, respectively, ranking these in the top three most important functions of the activity. Likewise, translating the English was ranked in the top three by 45% and 50% respectively. The main difference related to *working together to answer the question set.* This was ranked as a high priority by 24% in think-pair-share, but by 65% in teamwork. One explanation for this is that teamwork was assessed, whereas think-pair-share work was not.

Discussion

The findings from this early evaluation of the use of group work in a western style Master's course have provided useful data as a basis for reflection. At this stage, however, there is a need to confine the discussion to the opening of issues rather than the reaching of conclusions. As a consequence, the discussion of issues is more reflective than conclusive in nature incorporating many different elements of the reflective practice system suggested by Bain, Ballantyne, Mills & Lester (2002).

The evidence put forward in the paper suggests that the two collaborative activities, think-pair-share and teamwork, are fulfilling the hopes of the lecturers who

TABLE 5
Comparison of Top Three Activities for Pair Work and Teamwork

Activities	Pair work	Rank pair	Team work	Rank team
Making sense of the course work	88%	1	76%	1
Translating the English	45%	2=	50%	3
Exchanging ideas about leadership	45%	2=	21%	
Exchanging work experiences	39%		26%	
Answering (working together to answer) the question which was asked	24%		65%	2
Getting to know the other person (team members)	3%		0%	
Asking questions about the course work	36%			
Getting a chance to read the Chinese version of the study guide	12%			
Getting a break from listening to the lecturer talking	0%			
Listening to the views of other members of your team			35%	
Getting a chance to understand the readings			18%	
Negotiating the organization of the team work (roles, work allocation…)			9%	

decided to include them as an integral part of the program. The activities helped make the course applicable to the local context, increased student accessibility to course meanings and provided opportunities to resolve problems of interpretation and relevance.

Some concern exists about the possibility that think-pair-share activities may be too challenging for the cohort. The lack of relevant data on individual student proficiency in English prevents any cross checking between language level and response, but it may be that students who are reasonably proficient see translation as being less important than for those for whom English is a problem. An alternative and opposing interpretation includes the possibility that those who take on the responsibility are more aware of how important translation is and therefore give it, and themselves, more significance. In an overall sense this may be reading too much into the fact that a greater need for translation is shown for think-pair-share, since student suggestions about changing pair composition did not evoke any consistency about change that could be interpreted as having a direct impact on the provision of more language support.

From this analysis of variation in relation to responses to the two collaborative activities has come the opportunity to reflect on a number of key matters that can help guide future developments of the program. The most obvious of these matters is to persevere with the current form of teamwork, realizing that the more extensive and practical sharing available in the teamwork situation means that it is a potentially richer space for learning about leadership than think-pair-share. Partly also, the close connection between teamwork and assessment might be considered decisive in maintaining the commitment of students, who are struggling with new content at the same time as handling linguistic and cross-cultural challenges in all parts of the course.

Teamwork effects also extend beyond the 35-hour intensive teaching program. It was observed that by the end of the course many of the teams had become *guanxi* groups with such ties becoming an enduring outcome. Wang defines *guanxi* as "cultivating, developing and maintaining personal relationships on the basis of the continuing exchange of favors. Friendship and empathy between the two parties are of secondary importance, though they are useful in reinforcing the relationships." (Wang, 2004, p.81) . Subsequent visits have confirmed that this is, indeed, the case and that lasting connections have been made through the study programs, although this effect seems to have spread among the cohort, rather than being limited to the particular teams.

It is also evident that think-pair-share has advantages, which may not as yet have been fully capitalized upon. Besides its primary value in terms of conceptual consolidation, think-pair-share is seen as a useful circuit breaker, particularly in this bilingual lecturing context. The lecturers have continued to experiment with different uses of this strategy. Already students in the next cohort were able to see some changes in relation to feedback, the subject of some student suggestions. Following oral presentations of think-pair-share outcomes from volunteer pairs, views were collated and displayed on the whiteboard. In the much larger groups, which will be the norm in

forthcoming cohorts, this may be continued as a more practical innovation rather than any attempts at formal assessment. For the future too, think-pair-share efficacy could arguably be improved by way of determining and utilizing two or three different categories of task and then observing/collecting data about student use of strategies and responses to the same. Since analysis of task differentiation may well provide information on the language variable, a bonus would be that our present limited understanding of how students are coping with language transfer could be enhanced.

This last comment highlights language as currently the major issue of concern to the presenters. Although the consolidation of learning has been shown to be assisted by the operation of group work, data concerning the pivotal role of English in the course is still elusive. Lecturers constantly gain impressions from interactions with the interpreters, observations in class and assignment marking, but a further step is needed and that is to gain hard data. The introduction of some form of informal testing would be a valuable development. More could, perhaps, be gained from future questionnaires, which could be planned to discover in differing contexts how successfully students are making the transfer from one language to another and what more could be done to assist in this. It may also be that supplementation could be provided by individual case studies of the two forms of group work.

Conclusion

The reports given in this paper reveal a ready acceptance of both teamwork and think-pair-share by the Master's degree students in this off-shore Master of Educational Leadership course, despite the fact that the mature students might have had little experience with these in earlier formal study courses. Students evidently valued using both Mandarin and English to pool their wisdom, but whether or not this translates into formally assessed work is yet to be determined. Group work achieved the former gain by providing opportunities for the students to deepen their understandings, untangle any problems, share their experiences and extend their networks in the educational field.

Overall, it can be claimed that the findings enable the authors to move out of tentativeness to the assurance that both they and others can utilize group work as a component part of bilingual, content-based off-shore courses in countries such as China.

Acknowledgments

The authors wish to express their debt to the Chinese students who provided the data for this paper as well as to Dr Geoffrey Coyne who peer reviewed an earlier draft of the paper.

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Appendix
Sample Questions from the Second Questionnaire
Sample Questions on Teamwork

In what ways does team work help you study the course? 您认为在哪些方面团队活动可以帮助您学习本课程？			
What is your main contribution to the productivity of the team? 您对团队活动的主要贡献是什么？			
Do you think you would apply group discussion to your teaching / leadership practice? 您认为您会在教学/领导实践中使用团队大组讨论的方式吗？	Yes 会	No不 会	Not applicable不符合实际情况
Reasons for your choice请说明您选择的理由			
Would you like to see group discussion used by other ECU lecturers 您是否希望ECU其它教师用团队讨论来为你们授课？	Yes 是	No不 是	Not sure 不确定
Reasons for your choice请说明您选择的理由			
Was it the first time that you experienced team discussion in your study? 在您的学习经历中，您是第一次体验团队讨论活动吗？	Yes 是	No不是	
If Yes, why do you think it was not used before by Chinese lecturers? 如果是，请您说明为什么此方法以前没有被中国教师采用呢？			
By any chance could the group work be wasting the class time? 团队活动方式是否偶尔也会浪费课堂时间吗？	Yes 会	No不 会	Sometimes有时
Suggest ways to improve the **efficiency** of team discussion 请就如何提高团队讨论活动的效率提出建议。			
Suggest ways to improve the **effectiveness** of team discussion 请就如何提高团队讨论活动的效果提出建议。			
Do you like having a teamwork activity as part one of your assignments? 您是否愿意将一次团队活动评估结果作为一项考试成绩？	Yes 愿意	No 不愿意	Not sure 不确定
Why is this so? 为什么如此？			

Sample questions about pair work

In what ways does pair work help you study the course? 您认为在哪些方面，双人组活动可以帮助您学习本课程？			
What did you and your partner usually do in the pair work? 在双人组活动中，您和您的搭档经常做些什么？			
Do you think you would apply pair discussion to your teaching / leadership practice? 您认为您会在教学和领导实践中使用双人组活动吗？	Yes 会	No 不会	Not applicable 不符合实际情况

Reasons for your choice请说明您选择的理由:			
Was it the first time that you experienced pair discussion in your study? 在您的学习经历中,您是第一次体验双人组讨论活动吗？		Yes 是	No 不是
If Yes, why do you think it was not used before by Chinese teachers? 如果是，请您说一下为什么此方法以前没有被中国教师采用呢？			
By any chance could the pair work be wasting the class time? 双人组活动偶尔也会浪费课堂时间吗？	Yes 会	No不 会	Sometimes有 时会
Suggest ways to improve the **efficiency** of pair discussion 请就如何提高双人讨论组活动效率提出建议.			
Suggest ways to improve the **effectiveness** of pair discussion 请就如何提高双人组活动效果提出建议.			

International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 117-129
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Perceived Impact of Peer Observation of Teaching in Higher Education

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This paper explores participant perceptions of the impact of a Peer Observation of Teaching scheme offered as part of an accredited Postgraduate Certificate in Teaching for academic staff and faculty members in higher education. The Postgraduate Certificate Program has been designed to support the continuing professional development of academic staff and faculty members through integration of peer learning. Inherent in the design and delivery of the Peer Observation of Teaching scheme is the belief by all involved that learning about teaching in higher education – and heightening a sense of professionalism – stems from a continuous process of transforming and constructing personal meaning in a variety of related ways. This program has its theoretical basis in the Experiential Learning Cycle (Kolb, 1983), and the perceived impact of the scheme has been evaluated based on this cycle; participants over the past 5 years on the program have provided valuable insights into the demands of active engagement with abstract pedagogical theory, purposeful critical refection on classroom practice, and a challenging of assumptions through shared reflective dialogues with colleagues. Of particular interest are the ways that the scheme aids the integration of theory and practice, the value of interdisciplinary learning, and the benefits for new teachers.

There is little doubt that learning and teaching in higher education has become more challenging and more complex in recent years, and all for a variety of reasons. In this new millennium, academic staff and faculty members are increasingly challenged around a number of key philosophical issues, including contested visions of the role and purpose of higher education itself, and around the increasing marketization of knowledge production in a global economy. Individual academics no doubt position themselves in relation to all contested issues and develop tacit and conscious philosophies that inform their professional practices. Also challenging for the role of academics is increasing diversity in disciplines, increasing student expectations from teaching and learning, new demands in course design and delivery, and increasing emphasis on professional qualifications. The large question on what constitutes "good teaching" has itself been addressed globally by research. For example, Stefani (2005) in New Zealand in looked specifically at factors that might be expected to contribute to successful study outcomes for undergraduate students. However, there remains a growing fissure in this area. Trying to determine whether or not good teaching – of any kind – supports or encourages good learning is a thorny issue. There is not a generic definition of good teaching that suits all contexts and student cohorts.

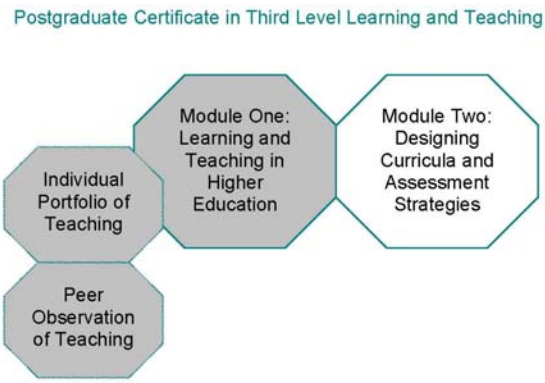
Such a plethora of challenges means that academic staff and faculty members need outlets to talk about their teaching. This paper discusses one such outlet, a peer observation of teaching scheme in the context of a Postgraduate Certificate in Third Level Learning and Teaching, which is an accredited continuous professional development (CPD) program for academic staff and faculty members, located in a higher education institution in the Republic of Ireland. In the context of this CPD program, the definition of peer observation of teaching is the formal process by which the good practice of staff and faculty members engaged in learning and teaching activities is identified, disseminated, and developed. The Republic of Ireland's education system is quite similar to that of most other western countries, and there are three distinct levels of education: primary, secondary, and higher (often known as third-level or tertiary) education.

Argued strongly in the paper is the importance of the climate of the peer observation of teaching scheme, one which is approving of dialogue, encouraging of open debate, and supportive of risk-taking in teaching. The scheme has been designed to provide a forum for debate and dialogue around what constitutes "good learning" for students and "good teaching" by academics, as these issues figure prominently in dialogue, thinking, and practices in higher education. Critical insights on the scheme are offered through a synthesis of relevant theoretical literature, discussion of the mechanics and climate of the scheme, and evaluations by the academic staff and faculty members participating over the past 5 years. The latter is complemented with my own experiences both as an educational developer and one of a team of tutors initiating and supporting the peer observation of teaching scheme.

Overview of the Program

Currently, there is no professional training requirement for higher education teachers in the Republic of Ireland as far as their teaching is concerned. However, there is growing recognition within the sector for training provision for lecturers and other academic staff and faculty members who have a teaching component to their work. To address this, in 2000, a Postgraduate Certificate in Third-Level

FIGURE 1
Integration of the Peer Observation Scheme to the Postgraduate Program for Teachers



Learning and Teaching was offered through the Dublin Institute of Technology (DIT). This program aims to enable academic staff and faculty members in the third-level sector to be effective, competent lecturers by providing them with a range of skills and knowledge to design, deliver, and evaluate education programs. It has been targeted at new and existing academic staff and faculty members in higher education institutions in the Republic of Ireland, including lecturers, librarians, and academic support staff members. The latter two have responsibility for teaching in their areas. It is continuing apace today, with currently over 100 academic staff and faculty members having successfully graduated from the program. To date, all participants on the program have been self-selecting and have chosen to engage with the program for their own Continuing Professional Development. Two-thirds of graduates are new to teaching in higher education and come to the programme within the first one to two years of their practice.

The Postgraduate Certificate Program consists of two modules: *Learning and Teaching in Higher Education* and *Designing Curricula and Assessment Strategies*. Each module involves a three-hour workshop/session each week and can be completed in one semester. This Postgraduate Certificate Program would normally be completed part-time in one academic year. With a focused intentionality, the Program uses a thoroughly researched and popular model of learning: Kolb's Experiential Learning Model (Kolb, 1983). The aim is that having experienced this model of learning as program participants, the lecturers will be well placed to implement and adapt it in order to facilitate the learning of their students.

The learning in the Postgraduate Certificate Program begins with the real experience of the lecturers in the role as teachers and facilitators of learning in their institutions. Participants are facilitated to reflect on their experiences in order to confirm strengths, raise questions, improve their practice, and innovate. This reflection takes many forms including pair work, group discussion, written exercises, workshops, and portfolio work. Participants are encouraged to make links between their reflections on practice and the theories and principles of learning and teaching. The generalization and abstraction also takes many forms including reading pedagogical theories, exploring best national and international practice, writing book reviews, participating in online discussions on WebCT, and developing a personal philosophy. Participants ask questions about the theories of learning and teaching from the viewpoint of their current practice. They also theorize from reflections on their practice. Experiential learning is a major key to learning. Participants try out different ideas and methods in their own situations, taking risks where relevant: their critical reflections provide key insights for further classroom experimentation and for taking risks in the learning and teaching strategies being employed. Lesson planning, project work and peer observation are among the strategies used to facilitate participants testing out the application of their learning. The Peer Observation of Teaching Scheme, which is the focus of this paper, has been integrated to Module One (see Figure 1).

While peer observation of teaching is used in a variety of higher education contexts, such as forming part of an application for tenure, or as part of quality-monitoring processes, it has been deployed on this program specifically as a critical reflective device for teachers developing an individual teaching portfolio. Indeed, Shortland (2004) reports that peer observation has become part of professional development programs for both new lecturers and established staff members. However, not all reports on peer observation are positive. Cosh (2002) has argued that there seems to be no real evidence that people develop and improve

through the judgments or comments of others: "In the case of experienced teachers in particular, a natural reaction to explicit or even implied criticism is to become defensive and inimical to suggestions of change" (p.172). A counterargument to this is that the participants in this present study were engaged in the scheme in order to reflect upon their own teaching and for active self-development rather than to make judgments upon others.

The recognition from the literature is that although used for a variety of purposes, it is generally held that peer observation of teaching is about enabling change for the better (Shortland, 2007; McMahon, Barrett & O'Neill, 2007). The process of peer observation in this program involves colleagues who review an educator's teaching through classroom observation and exploration of instructional materials and course design. Peer observations are particularly useful for self-assessment and improvement of teaching skills, but it is important for participants to keep in mind that what is gained through peer observation will ultimately benefit students. Therefore, observation is intended for reviewing the teaching process and its relationship to student learning. Ultimately, peer observation aims to provide the participant with feedback, support, and assistance from his or her colleagues. Moreover, when the participant observes, he or she will be able to see teaching from the students' perspective. Webb (1996) believes the more we as teachers can share a common form of life and common experience with others in our institutions, the greater the possibility is that we will be able to extend our horizons to encompass a fuller understanding.

Clarity on the Scheme's Rationale

At the induction session of the Program, it was important to convey the rationale behind this peer observation of teaching scheme to the participants. Chism's (1999) suggestions (see Table 1) on the "who," "what," "where," "when," and "how" were very useful in this, particularly for illuminating the "why" of the scheme.

It was important for the participants in the scheme to recognize that they would be involved in a developmental model of peer observation which would focus on assisting them to improve their teaching. Such a model is fairly typical in Postgraduate Certificate Programs of this genre for academic staff and faculty members. This model involves tutors in the program advising and facilitating the participants on working together to develop ways of improving their teaching. The role of the tutor in this scheme is to assist all the participants in the scheme to improve their teaching skills through the modeling of practice in observation and the giving and receiving of constructive feedback on practice. Gibbs (1995) has argued for the need for observer training or briefing because observation of teaching is particularly subjective and fraught with difficulties and so requires a clear framework.

TABLE 1
The Rationale and Context of the Peer Observation Scheme

Who	Provision and discussion of the definitions of 'peer': within this Program, this involves consideration of who is eligible to conduct observations of your teaching
What & Where	Enumeration of the range of practices defined as teaching (a 'what' and 'where' of peer observation). These practices might include but are not limited to classroom teaching, scholarship on teaching, advising, web-based instruction, distance learning, dissertation and thesis advising, independent study, curriculum development. Articulation of the areas of focus for the observation of classroom teaching (e.g., articulation of course goals, learning outcomes, mastery of course content, effective use of instructional methods and materials, appropriate evaluation of student work).
When	Definition of the schedule by which all participants on the Program will be observed: between September and January of each academic year.
How	Establishment of the process by which peer observation of teaching will take place. This involves consideration of what tools and methods will be used to observe the teaching sessions, and what types of documentation will be required of participants as peer observers.
Why	Contemplation of the purposes for which teaching is being observed, and the principles involved: this involves articulation of the relationship among the various types of evaluation of teaching currently taking place in higher education today (i.e., student, peer, administrative, self), and articulation of the relationship between and provision of opportunities for both formative and summative evaluation of teaching, with the sole emphasis of the scheme in this Program being for formative development purposes only.

According to Gosling (2005), the objectives of peer observation of teaching within such a developmental model are:

- To facilitate reflection on the effectiveness of the participant's own teaching and identify their development needs;
- To improve the quality of learning and teaching;
- To foster discussion and dissemination of good practice; and
- To increase participant awareness of the student experience of learning. (p.16)

The developmental model assumes that we have a strong evidential basis for knowing what good practice in teaching is, but as argued in the introduction to this paper, this remains a contested area. However, there is evidence that advice given to participants on such Postgraduate Certificate Programs does lead to them adopting a more student-centered approach in their teaching (Gibbs, 2003; Gibbs & Coffey, 2001).

Theoretical Underpinning of the Scheme

This section discusses the prior literature addressing the key areas for peer observation: the reflective practitioner, self-efficacy, Kolb's experiential learning cycle, and – to a lesser extent because it appears to be becoming outmoded in the literature – SGID.

A fairly common theoretical framework underpinning several of the peer observation of teaching schemes reported in the literature is the reflective practice model (Bell, 2002). This model involves the reconstruction of one's experiences; the honest acceptance and analysis of feedback; the evaluation of one's skills, attitudes, and knowledge; and the identification and exploration of new possibilities for professional action (Schön, 1983). In his later, seminal research, Schön (1987) described reflective practice as "a dialogue of thinking and doing through which I become more skilled" (p.31). Critical reflection within the scheme is composed of three components: questioning or reframing assumptions; taking an alternative perspective; and realizing that assumption change changes meaning. This can lead to transformative learning, whereby reflection should be a shared rather than remain a personal experience for best learning.

The concept of reflective practice and its potential role in professional, personal and organizational development in HE is fundamental to the scheme. Askew (2004) reports that that a reflective model of peer observation of teaching can become a key process in the professional learning of academic staff and faculty members and can contribute to fashioning a consciously reflective learning organization. Indeed, it can prevent teachers from becoming isolated and teaching from becoming routine and mundane. Linked to this, the current scheme utilizes a mentoring component; "mentor" literally means "wise and trusted advisor or counselor." This component is an essential aid to academics' professional development, looking beyond day-to-day activities to the future through fostering talent and potential. Peers are invited to consider how the processes of coaching, mentoring, or both could assist their professional development and teaching activities. The scheme encourages colleagues to reflect on how they could use "coaching" techniques to strengthen their knowledge and understanding to influence the quality of students' learning outcomes.

In addition to the recognition of the importance of reflective practice, this current model being reported is based upon Bandura's (1997) theory on self-efficacy. According to Bandura (1977), people's beliefs about their efficacy can be developed by a number of sources of influence. The most influential source of these beliefs is the mastery experience. When a person believes he or she has what it takes to succeed, this person develops a resilient sense of efficacy. If faced with difficulties or setbacks, this individual knows that he or she can be successful through perseverance. The perception that one's teaching has been successful increases efficacy beliefs raising expectations that future performances will be successful. In contrast, failure – especially if it occurs early in the learning experience – undermines one's sense of efficacy. The second influential source of these beliefs is the vicarious experience. It is one's direct or vicarious experience with success or failure that will most strongly influence one's self-efficacy. Learning does not need to occur through direct experience. When a person sees another person accomplish a task, the vicarious experience of observing a model can also have a strong influence on self-efficacy. By observing others succeed, our own self-efficacy can be raised.

The act of observation has been regarded as essentially a sensory experience. Hergenhahn (1982) notes that Bandura's theory of observational learning suggests that "anything that can be learned by direct experience can also be learned from observation" (p. 405), although the teacher must also take into account a range of attentional, retentional, motor, and motivational processes (p. 406). In a similar fashion, individuals' self-efficacy can be reinforced when they observe their peers perform tasks successfully: "observing similar peers improving their skills conveys that students can learn as well" (Pintrich & Schunk, 2002, p. 172). In this model, participants' self-efficacy was enhanced by means of observing

FIGURE 2
Model of Peer Observation for the Postgraduate Certificate in Third Level Learning and Teaching

others as evidenced in the evaluative comments from participants.

Social persuasion is a third way of strengthening people's beliefs that they have what it takes to succeed. People who are persuaded verbally that they have the capabilities to master given tasks are likely to put in more effort and continue it over time than if they believe self-doubts and dwell on personal deficiencies when they are faced with difficult situations. Taken altogether, a teacher with high self-efficacy tends to exhibit greater levels of enthusiasm, to be more open to new ideas, to display willingness to try a variety of methods to better meet the needs of their students, and to be more devoted to teaching.

Kolb's experiential learning model lies at the heart of the PG Certificate in Third Level Learning and Teaching. The scheme brings this to the fore by enabling the participants to reflect on their current practice, share their experience with supportive peers, take risks and experiment in a supportive and friendly learning environment, and come to an understanding of new concepts with which to analyze their teaching and new methods to adapt and try out in their practice. Experiential learning is intrinsic to the scheme in that knowledge is created through the transformation of experience. The peer partnerships (mentoring relationship), if they remain in tact, can engage in continual testing of practices and ideas leading to professional development over time, and this concurs with Shortland's (2004) research. Yet it is important to remember that experience is framed and shaped by the culture in which it is experienced. The amount of experience is unrelated to its richness or complexity. This scheme facilitates the use of new information in authentic situations and can lead to increased learning for each of the participants.

The steps involved in a typical peer observation of teaching scheme can arguably be likened to those in Small Group Instructional Diagnosis (SGIDs) where the process involves an initial meeting with the teacher; a classroom interview, which requires 20 to 35 minutes of class time (depending on class size); and a final report and teacher follow-up with students (Clark & Redmond, 1982). However, SGIDs are specifically a vehicle for gathering student feedback, and they involve a process designed to gather information directly from students and teachers with the goal of aligning expectations to improve teaching and learning.

Mechanics of the Scheme

The peer observation of teaching scheme is entirely confidential between observer, teacher and Program tutors, and it is only used within the confines of the Certificate Program. Participants may be observed as many times as they wish, but they need to select two peer observations to include in their teaching portfolio, which is the assessment mechanism of the program. There are three stages to the observation process, as illustrated in the accompanying model (see Figure 2).

Before the peer observation of teaching takes place, it is important to have a preliminary or pre-observation meeting with the observer. This meeting should focus on the teacher's goals for the observation, and what he or she would like the observer to focus on so that the feedback can be meaningful. Also at this pre-observation meeting, it is important to identify appropriate observation opportunities, bearing in mind that the class visited should involve typical class activities such as small group work, laboratory work, a lecture, or discussion. Further, issues to be agreed upon include the following: the overall teaching schedule; the arrangement for observation of teaching session(s) and scheduling of a feedback session a few days later; the learning outcomes for the agreed session(s); the assessment schedule and teaching scheme for the

module (to see how session fits in with course outcomes); the criteria for observation, as determined by the model selected or developed; and the format for comments on observation, as determined by the peer observation model selected or developed.

The peer observation of teaching itself is carried out as already agreed upon at the preliminary meeting. It may be useful if the teacher informs the student group about the observation a week or so in advance. Students need to be assured that the purpose of the observation is to assist in the development of the teacher's or observer's professional skills. Much of the observer's attention should be on the students, in order to focus on their listening, motivation, understanding, and learning. However, as Martin and Double (1998) suggests, it is important for "the observer to be involved in the experience without being drawn into dialogue or intellectual debate" (p. 164). At the end, the teacher being observed should take a few minutes to make some notes about the class session.

After the observation, it is vital to have a post-observation follow-up session. By focusing on three key points – a review of criteria and agreements, a review of the learning outcomes of the module and the observed session, and a review of the lesson plan – this meeting can be perceived as a simple "giving and receiving feedback model." However, as Gosling (2005) states, this notion of "giver" and "receiver" needs to be replaced by a dialogue model in which both parties are regarded as equal and mutual beneficiaries of the process. The teacher normally begins this meeting by sharing his or her thoughts on the observation before listening to the observer's comments. Then constructive feedback and discussions on teaching style and delivery are at the core of the meeting, and it concludes with identification of action steps for improvement to practice.

At all stages in this process, reflection on practice is the key to increasing levels of self-efficacy in teachers. In the process of becoming "self" aware, Peel (2005) suggests that, "particular attention is paid in the literature to the debates around critical reflection, reflective practice, reflective dialogue and transformative learning" (p. 491). Reflection about professional practice is promoted as valuable, especially where it is through "reflective dialogue" (Brockbank & McGill, 1998, pp. 5-6). Osterman and Kottkamp (1993) offer a definition of reflective practice that holds resonance for the model of peer observation of teaching used in this CPD program for academic staff and faculty members: "Reflective practice is viewed as a means by which practitioners can develop a greater self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development" (p.19). From an analysis of the case studies reported in the literature of the various models used for peer observation of teaching, it seems that critical reflection is a necessary prerequisite to the developmental discourses associated with teaching in higher education.

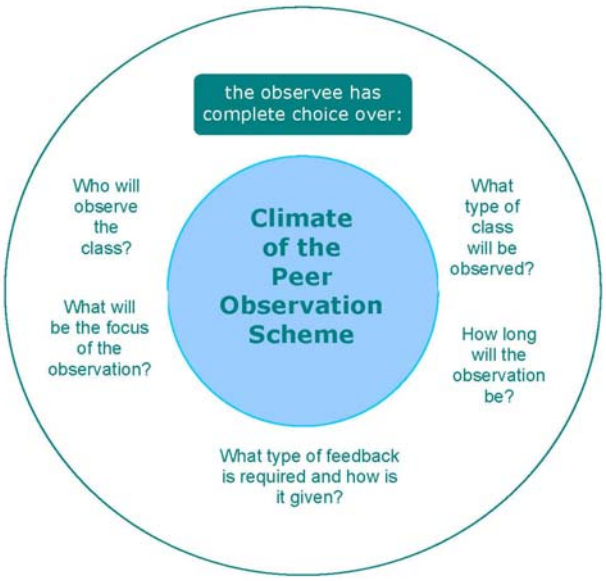
Climate of Observation on the Program

The climate of the peer observation process in this program is established and cultivated from the outset. Research has been conducted around the importance of the relationship between observer and teacher, with the relationship needing to be based on confidentiality and the creation of a non-judgmental environment (Brown and Jones, 1993; Tremlett, 1992). The ethos behind the process can be summed up as formative, developmental, collaborative, reflective, and enabling of a personal exploration of practice. At all times there is support of the following:

- willingness by participants to explore ideas and share reactions, to give and receive feedback;
- development of trust among participants which allows for honest and open exchange to encourage reflection about teaching;
- work with peer observers who are warm and responsive, inspiring trust and confidence in the person being observed;
- assurance that academic staff and faculty members being observed are open to change and welcome insights from colleagues;
- help for academic staff and faculty members to take an active role in the observation process through self-assessment of strengths and areas for development in learning and teaching, and reflection on teaching;
- focus on the observable, providing teachers with the kinds of constructive feedback which they desire; and
- enough time to include a preliminary conversation about the desired focus, the observation itself, and a chance to discuss reactions face-to-face.

The participant has control over all stages in the establishment and flow of the process (see figure 3). This is based upon principles of adult education, whereby learning on the scheme is a social process in which the participants need to collaborate and interact with each other. The participants in this scheme are involved in learning because they want to be. As learning is collaborative, it needs to engender mutual respect. It is emphasized that learning within the scheme is noncompetitive and should take place in a supportive environment. Learning should be problem-

FIGURE 3
Climate of Peer Observation on the Programme



and experience-centered, non-threatening, and supportive. Learning should be open-ended, focus on problem-finding and solving, and be tolerant of uncertainty, inconsistency, and diversity. As the participants interact with their peers, they will learn to learn from each other, and this can increase motivation as they realize that they have control over the entire peer observation of teaching scheme. They take control of the process by setting their own goals, working out the mechanics of the scheme, and evaluating their own learning at its close. The self-directed nature of this scheme means that the experiences are structured so that there is opportunity for dialogue, for interchange, and for interaction among peers of a heterogeneous group.

Peer observation of teaching has been seen by some to be a social tool to enhance teaching practice (Peel, 2005). In this program it was, in a sense, "a means to an end" since it was integral to the satisfactory completion of a teaching portfolio, and by default, the Postgraduate Certificate in Third Level Learning and Teaching. An important insight to emerge from the scheme was the seeking by participants to understand both their own and others' classroom behavior, and in doing so, reveal a great diversity in practice. It has been acknowledged that insights into personal practice are gained both from the act of observing as well as from being observed (Martin & Double, 1998).

Participant Evaluation: Methods of Data Collection

For this to be a fully collaborative scheme of peer observation of teaching, it is argued that it needs to allow sufficient opportunities for all participating to voice their views of the scheme and to be able to make proposals for revisions. Evaluating the scheme is an essential part of sustaining it over any length of time. As Gosling (2005) believes, this is part of the negotiability and self-reflexive nature of peer observation of teaching as a social practice. It enables participants to express their reactions to what has happened and to develop their understanding of the meaning of the experiences they have had.

To gain insights into the lived experiences of the participants in the scheme, various data was used including evaluation forms, interviews, and document collection. Ninety participants agreed to evaluate the scheme by completing the evaluation form. The primary narratives consisted of three in-depth, semi-structured interviews (Denzin and Lincoln, 1994) with six participants in each group. In addition to the three interviews, all 90 participants agreed to allow their peer observation components of their teaching portfolio to be analyzed which focused on the peer observation activities, pre- and post-observation meeting notes, and challenges and successes within the scheme for them.

In order to continue evaluation of the scheme, and based on the review of the literature, a more detailed qualitative evaluation is in the process of being constructed, and it will be distributed to future participants.

Results

A number of positive and developmental outcomes from the scheme emerged from these evaluations.

These were categorized under the following areas of Kolb's learning cycle: application of theory to practice, reflection, experimentation, and discussion in the light of the issues they raise for educators involved in the design and delivery of such peer observation schemes.

Application of Theory to Practice: Discovering New Ways of Talking About Teaching

There were instances where participants were involved in comparing the quality of their teaching against experiences and knowledge of relevant educational theory. Bolin (1988) believes that heightened connections between theory and practice are evident in reflective educators, and this is borne out by the following comment: "In the Peer Observation, the participation of colleagues and learning from others helped me apply what was learnt from the theoretical aspects of the program" (2001-2002 participant).

While there is an increasing body of literature to help promote scholarly dialogue about teaching (Gilpin, 2000; Gosling, 2005; Boyer, 1990; Shulman, 2000), and indeed an International Society for the Scholarship of Teaching and Learning, many staff members still find it difficult to talk about their teaching, and in some departments teaching is seldom discussed. Gosling (2005) suggests that one view about why this has happened is because the language we have available to us for this purpose has become impoverished. Palmer (1998) portrayed a rationale for this: "We rarely talk with each other about teaching at any depth – and why should we when we have nothing more than 'tips, tricks and techniques' to discuss? That kind of talk fails to touch the heart of the teacher's experience" (p. 11).

However, for the apprentice teacher, starting out on his or her career in teaching, the practical tool-kit approach of tips and techniques, does have its merits:

- "Discussing ideas and techniques of learning and teaching with peers was so important; I learnt so much from my class-mates in terms of the how-to of teaching, and the follow-up discussions gave us a chance to explore a bit deeper the why part" (2002-2003 participant).
- "The greatest areas for learning for me were the peer observations where we all participated and had an opportunity to learn from our peers and pick up some 'tricks of the trade' and try these out in my own practice" (2005-2006 participant).

Bamber (2002) argues that such apprentice teachers have the most to learn from feedback on peer observation and often appreciates the advice that is available to them.

Reflection: Illuminating the "Why" of Teaching

The benefits accrued for the majority of participants went further than techniques, teaching aids, or "tricks of the trade" as arguably these alone are insufficient to enhance teaching. According to Peel (2005) this requires a synthesis of substantive knowledge, a critically *reflective* engagement with teaching practice, and a confidence in oneself. Hammersley-Fletcher and Orsmond (2005) have indicated that reflective practice involves the process of teaching and the thinking behind it, rather than simply evaluating the teaching itself. It is therefore addressing the question of *why* as opposed to *how* and, most importantly, it is about learning from this process. As one program participant observes, "The peer observation is beneficial to both the observer as well as to the colleague being observed; I found these very good because in writing reflectively about the experience you were subconsciously trying to figure out why you would do this and whether you were doing it better" (2003-2004 participant). Martin and Double (1998) believe that in an educational setting, a process of peer observation that encourages and supports reflection is likely to have important benefits in terms of the refinement of teaching skills. This is borne out in educators' comments:

- "The peer observations were fantastic as I have had the opportunity to think about discuss personal areas of my teaching that it has not been feasible in general class sessions" (2005-2006 participant).
- "Peer observations were essential, in that they confirmed my ability to get the knowledge across to my students, while giving me valuable insights into how to further improve my delivery" (2005-2006 participant).
- "Good thoughtful insights about my teaching skills were gained from listening to my observers" (2005-2006 participant).
- "The peer observations have been particularly worthwhile for allowing me the chance for a micro exploration of aspects of my teaching" (2005-2006 participant).

Experimentation: Increased Confidence and Self-Efficacy

It is important to note that observation may be an unthinking, mechanical process that does not necessarily modify intentions. Behavior that is modified through observation is not necessarily modified for the better, as in experimentation with new strategies for the first time in front of a live class. However, reading

about, reflecting upon, and experimenting with strategies in the classroom can support the teacher in movement towards improvement in his or her teaching craft. According to Brockbank and McGill (1998), it is the layering of reflective activities that can contribute to transformational learning that involves reflection about knowledge, action, and self, together with reflection on that learning. At one level, the peer observation of teaching provided a range of opportunities for critical discussion and feedback on performance. When delivering teaching, it is important to remain receptive to other teaching styles and methods in order to maintain a level of experimentation within one's own repertoire and diminish repetitive and tedious learning for one's students. One educator observes, "Testing out new strategies that I had read about on the program, and had a chance to observe my peer adapting for their practice really was important for me" (2004-2005 participant). For most participants, engaging in this scheme provided the first feedback on their teaching they had ever received, which for many was a welcome affirmation of their teaching skills. For many, it offered a forum for conversation and scholarly exchange about teaching, as the following comments indicate:

- "The tutor review gave me less confidence in my teaching but the peer reviews were really helpful to me developing strategies for delivering my course" (2000-2001 participant).
- "These were painful at the time but very useful; I did feel uncomfortable for the first one, but when I saw how much I was in control of how things were done, I looked forward to the next one and grew in confidence about them and my teaching role" (2003-2004 participant).

Many expressed a developing sense of confidence in their teaching approach. Encouraging teachers to share insights and provide each other with support can enhance their self-assurance and zest for further exploration of their practice. Developing their sense of professional worth is vital, and placing an emphasis on the dissemination of good practice rather than on the locating and correcting of poor practice can be fundamental to success. Program participants observe:

- "The peer observations provided valuable feedback on my classroom environment – areas that had been working well received confirmation of that fact, and areas that I had identified as needing improvement, well I got a few different perspectives on why things were going wrong – all were worth considering; I felt more confident that I had been working along the right lines" (2003-2004 participant).
- "I found these most useful, in fact more so that I had anticipated. It was great to get some affirmative feedback and to at least know that I am on the right track" (2003-2004 participant).
- "These were an excellent experience; it was honestly great to be observed and to observe others; it gave me assurance that I can teach" (2003-2004 participant).

Experimentation: Perceived Changes

As reported in Bell's (2002) study, and mirrored here, some participants reported making immediate changes to their teaching practice, articulating improvements in the design and implementation of learning and teaching activities. It was interesting to note in Bell's study that such changes were categorized into technical, pedagogical, and critical changes (p. 33). Similarly, in this present study, it was found that technical changes and more profound pedagogical changes were perceived. The former related to skills and techniques observable in the classroom, with technical foci including commentary on provision of online components of courses and the use of audio-visual media in teaching sessions. Pedagogical foci included commentary on developing students' critical thinking, communication, and collaboration skills; strategies for motivating students in class; and content sequence cohesion. Educators' comments on these include the following:

- "I thought that the peer observations and subsequent written feedback and discussions on how my students were learning in class and how the course content were structured were a very good indicator of improvements made to classroom practice" (2004-2005 participant).
- "The peer observations and follow-up discussions were the most important aspect of the program for enabling me to make much-needed changes to my practice in terms of my presentation skills, introduction of more activity to lessons, and how I was using WebCT to support my classroom teaching" (2004-2005 participant).
- "These post observation discussions were invaluable for pointing one in the right direction to make improvements or to see someone write well done, good job!" (2004-2005 participant).

- "I received a lot of very valuable feedback on how I delivered my lectures, particular on my use of video and audio clips, which I was able to put into use straight away" (2005-2006 participant).
- "I went for a recent interview for a permanent lecturing position in my college, and I sincerely believe my graduation from the certificate and in particular, my involvement in the peer observation scheme was a valuable asset that I drew upon; it contributed to my presenting well at the interview and it was evident that my knowledge and understanding in learning and teaching had greatly developed; I drew on examples of how I introduced more peer learning and students working together and redesigned the learning outcomes to concentrate on analysis and critical and creative thinking, all which are vital in my nursing course. Overall, I greatly appreciated the unassuming and respectful support and professionalism from all involved throughout the scheme" (2005-2006 participant).

Indeed, it has been suggested by Wade and Hammick (1999) that a self-diagnosed need for learning provides greater motivation to learn than an externally diagnosed requirement. The participants recognized that observation offered them potential to promote self-knowledge and personal development, particularly when it is part of a continuing process; in fact, each year of the scheme, there were plentiful requests such as this one for continuation beyond its scheduled life span: "Probably not possible from a scheduling point of view, but the scheme could be improved further by some follow-up observations in the second semester to observe teaching developments" (2004-2005 participant).

An important consequence of the scheme is that everyone who participated had a chance to learn how to be more effective by watching the teaching of others. One participant notes, "As a new teacher, I found the opportunity to really get to know my colleagues on the program and learn from them through this scheme, has shown me the advantages of maintaining such connections" (2001-2002 participant). Arguably, this can be a double-edged sword in that it can be a revelation to see how someone else deals with a problem with which we are struggling, but we may not be able to replicate precisely what works so well for another teacher. What is best practice for one teacher might not work in the contact or hands of another. That very notion of "best practice" is also contentious, along with what is meant by "improving teaching." That is, what precisely constitutes improvement will reflect the nature of the discipline, the ethos of the department and institution concerned, the personal philosophies of the teacher, and most importantly, the characteristics of the students being taught? For observation of teaching to have a decipherable and agreed objective, it is important to have a shared understanding about what types of improvement are being sought.

However, the experience of observing another teacher in action and discussing their ideas about teaching provided a useful learning opportunity for these participants. There appears to have been advantage to like-minded colleagues coming together to consider and discuss issues in relation to their practice. One educator in the program notes, "Knowledge shared and gained from my peers in this scheme - and friendships formed as a result - were the most important parts of the whole program" (2002-2003 participant).

"Opening up" the culture of teaching and learning is an important function of the scheme as part of this PG Certificate in teaching program. Its essence is about "membership of [the] academic community" as illuminated in Rowland's (1999, p. 306) research. Collegiality and the development of professional relationships is an important element of peer observation. However, working with – and learning from – others raises the issue of power in the voluntary peer relationship; the observer may be viewed as being in the more powerful role. Indeed, MacKinnon (2001) has gone as far as stating that the power relationship between observer and teacher can become imbalanced. Rowland (2000) believes that informal collegial relationships are often the most fruitful. Trust is critical for a successful reflective experience and time is required to build this. Webb (1996) believes that "the more we as developers can share a common form of life and common experience with others in our institutions the greater is the possibility that we will be able to extend our horizons to encompass a fuller understanding" (p. 105).

An interesting finding of this study was the role of interdisciplinary learning in the scheme. Sharing of, empathy with, and development of diverse subject practice is worth further exploration in itself. Learning takes place from the "double" perspective of being the observer and the observed. The interdisciplinary dimension of peers in a program such as the Postgraduate Certificate in Third Level Learning and Teaching coming together to offer each other feedback on practice is an important consideration. Each has diverse disciplinary commitments, and the open process and climate of the scheme helps each of them explore his or her own values and knowledge to develop educational understanding and practice. Comments on this dimension include the following:

- "The peer observations were excellent. I actually think I might get other colleagues from other departments in the School to do it for me every so often in the future as it is a great learning experience interacting and communicating with colleagues in this way, and needs to be further capitalized upon in order to make them fully worthwhile" (2005-2006 participant).
- "More of them would be great, because of the variety of classes I teach I would have liked to have had two observations for each so as to cooperate with more colleagues from other disciplines and as a result be able to compare feedback and continue to make relevant changes to my classroom practice" (2005-06 participant).

However, it is believed that participation on this scheme has taken the lecturers beyond the point of being subject specialists who reflect on subject content and into consideration of learning and teaching philosophies and cultures. In this way, it is suggested that increased academic debate is being encouraged in the program.

There were a number of problems identified with the scheme. Areas for development included further consideration by participants of organization of practice and time management, including building in more time for preparation for the scheme, and from the program perspective, further consideration of subject domain and generic "matching" of observer and teacher. Program participants note the following:

- "The peer observations were a very worthwhile exercise, especially when you receive positive feedback. Again a lot of time required to prepare these sessions and do up paperwork. They also happen at a very busy time of year" (2002-2003 participant).
- "They required lots of preparation and were time-consuming" (2005-2006 participant).
- "I found myself my own best critic. The feedback from my peers was all positive and so I found it hard to learn anything from them" (2005-2006 participant).
- "Perhaps have a little bit more time receiving feedback from one's peers, in particular for dealing with particular aspects of delivery that need improvement, and provision of specialist advice on how to make successful improvements where necessary" (2005-2006 participant).

Summary

While it is recognized that many may disagree with the need for such a mechanism at the higher education level, this peer observation of teaching scheme has provided a means for fellow educators to observe events that may increase learning in action and that the teacher might contemplate before and during his or her teaching. This study has shown how the scheme aids the integration of theory and practice, how it focuses on the value of interdisciplinary learning and how the practice of new teachers to higher education can benefit.

A number of implications for the practice of designing and delivering developmental peer observation of teaching schemes arise from this work. In order to overcome resistance to talking about teaching and enable participants in such schemes to get to the essence of the teacher's experience, we need to provide the climate and opportunity to talk about teaching. This is important for staff members to not feel uncomfortable or threatened when they do so; thus, they can feel genuine benefits to themselves and their students resulting from participating in the scheme and devoting time to teaching and learning issues. The climate of the scheme is vital, and I would stress to participants that as part of the Postgraduate Certificate Program their involvement in teaching observation of peers is potentially a unique experience for them as, currently in Irish higher education, limited opportunities exist for reviewing and improving teaching practice.

In practical terms a peer observation of teaching scheme needs to have a clear structure with agreed purposes, procedures, and outcomes involving suitable preparation, follow-through, and rules of confidentiality. Saroyan and Amundsen (2001) have described teaching "as a complex, cognitive ability that is not innate but can be both learned and improved upon" (p.344). Specifically, teaching is a complex process involving the dynamic interaction between the students, teacher, and the knowledge, and the power of teaching is found in the strength of the interactions between these three. Enhancing and building these interactions requires the teacher to be creative, knowledgeable, and passionate about the subject. This article has considered the fact that educational practice is value-laden and the real quality of teaching – in the lecture theatre, seminar room, or laboratory – is critical to the learning of all students. Arguably, however, the possible risks involved in this developmental model of teaching observation are complacency, conservatism (unwillingness to take risks), and a tendency to be unfocused.

Marshall (2004) has noted that "the power of peer observation resides in its developmental and collegial orientation and its exposure of colleagues to affirmation, constructive criticism, and the experience of how others teach differently" (p.187). From this evaluation of the scheme in the Postgraduate Certificate in Third Level Learning and Teaching, peer observation of teaching has been perceived by participants to be particularly useful for self-assessment and improvement of teaching skills. Peer observers have learned through the process of watching another teacher, and those being observed have learned through the valuable comments and observations of their observer. Within this context an attitude of trust and helpfulness has been essential for the success of the peer observation scheme so that the positive outcome is for both observer and teacher to enhance their understanding of their professional practice.

It is important to keep in mind that what is gained through peer observation can ultimately benefit students. Therefore, finally, it is recommended that evaluation of longer-term impact of such initiatives take place by involving the actual students of the academic staff and faculty members in such schemes to ascertain what if any real benefits are produced for enhancement of student learning, for improvement to individual teaching practice, and for leadership to promote change in departmental climates.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 130-139
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

A Transactional Model of College Teaching

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College teaching is a complex endeavor, which can be difficult to understand. Teacher reflection has become one means of comprehending the intricacies associated with teaching and learning. An abundant literature base examines individual elements of teaching, but looking at individual elements may encourage reflection on just a part of the process. The Teaching/Learning Transactional (T/LT) model provides a framework to guide reflection. This paper outlines the components of the model and provides a case study that represents its application. The T/LT model encourages teacher reflection that views teaching holistically. It is designed to encourage dialogue that frames teaching as a complex encounter of the human experience. Changing the language we use to discuss teaching may serve to deepen our understanding of this complex act, and in turn, improve our overall practice.

Teaching is a complex act. In an effort to identify the nature of this complex endeavor, teacher reflection has become a common approach to studying teaching (Bolton, 2001; Calderhead & Gates, 1993; Carr & Kemmis, 1986; Schön, 1983, 1987; Shulman, 1986; Strong-Wilson, 2006; Valli, 1992; van Mannen, 1977; Zeichner, 1994; Zeichner & Noffke, 2001). Teacher reflection has focused mainly on the development of primary and secondary teachers. More recently, however, teacher reflection has been explored within the context of the scholarship of teaching in a university setting (Brookfield, 1995; Kreber, 2005; Lyons, 2006; McAlpine, Weston, Berthiaume, Fairbank-Roch & Owen, 2004; Richlin, 2001). Due to its interpretive nature, reflection can be a difficult process to teach to and model for others (Jay & Johnson, 2002; Ward & McCotter, 2004). Some authors contend that teacher reflection in higher education often lacks intellectual rigor and sophisticated analysis (Bleakly, 1999; Ecclestone, 1996; Rodgers, 2002; Rogers, 2001). The Teaching/Learning Transactional (T/LT) model proposes a framework for reflection that allows for a critical examination of teaching in higher education that is systematic yet sensitive to an aesthetic understanding of teaching and reflection.

Quality teaching requires a sense of artistry (Barrell, 1991; Dawe, 1984; Dees, 2000; Dees, Campbell, Jones, Pennock & Samad, 2003; Eisner, 1979; 2002; Gage 1978). Teaching artistry necessitates a "thinking-in-the-moment" mentality that is sensitive to the shifts and changes that occur within the classroom. Similar to other artistic endeavors, teaching artists reflect on their work before, during, and after the moment to inquire into aspects of the experience that are meaningful and transformative. When this reflective process is done well, there is an aesthetic dimension to teaching that heightens the experience for both teacher and student (Bundy, 2003; Eisner, 2002, 2006; Fenner, 2003). Thus, teaching artistry is cultivated through a pre-, in-the-moment and post-event awareness of the educational experience. Likewise, teacher reflection requires this complex reflective thinking.

Russell Rogers' (2001) analysis of reflection in higher education notes that there is a common theme in the timing of reflection. He writes

> There are two major time-aspects to the experiences upon which individuals reflect – reflection in the moment (called reflection-in-action or contemporaneous reflection) and reflection after the fact (called reflection-on-action or retrospective reflection)…most of the methods to foster reflection…in the literature of higher education are focused on retrospective reflection (p. 54).

Due to the ease of documentation, including journals and critical incidents, retrospective reflection has dominated much of the study of teaching in higher education. Reflection-in-action as identified by Schön (1983/1987), however, highlights an appreciation and understanding of the awareness of in-the-moment tacit choices that are so important to the artistry of teaching. Schön (1983) writes "reflection-in-action…is central to the art through which practitioners sometimes cope with the troublesome 'divergent' situations of practice" (p. 62). Making tacit knowledge known is difficult, and a model of reflection that encourages thoughtful inquiry before, during and after the event requires a unique frame for understanding the teaching/learning experience.

The goal of the T/LT model presented here is to provide a framework to guide teacher reflection before, in-the-moment, and after the event, that recognizes the complexity of the act of teaching, is sensitive to the aesthetic dimensions of both teaching and reflection, and provides a context to examine tacit decisions made during the act of teaching. The T/LT model is designed

to present a qualitative description of the key elements that occur during the teaching process, bring these elements out into the open, and then encourage reflection and discussion regarding the experience.

Naming, describing, and understanding the many facets of teaching can be daunting. Historically, in an effort to deal with this task, some scholars of teaching have pulled the elements apart from the act as a whole and studied each specific piece in isolation. Literature on assessment, teaching style, and classroom environment can be found in abundance in bookstores, libraries, and professional journals. Although informative, this approach to understanding teaching may miss much of the complexity and aesthetic intricacies of the act as a holistic enterprise. Without question, to be an effective teacher one needs to understand assessment, instructional strategies, and many other topics. When one teaches and reflects on teaching, however, these elements are connected to many other issues that affect the overall process. Assessment, learning style, environment, content knowledge, and the rest, all interact in the teaching event. Increasingly, there is a growing interest in understanding that interaction and how teachers reflect on it (e.g., Palmer, 1998; Timpson, 1999).

The T/LT model encourages teacher reflection and research that view teaching as a holistic experience. Developed from the perspective that inquiry needs to appreciate the complexity of human learning, this T/LT model posits teaching as a transactive process in which all of the elements involved in the teaching event interrelate, connect, and influence the classroom experience (Dewey, 1933, 1938; Dewey & Bentley 1949; Eisner, 1994). The model promotes holistic inquiry into classroom occurrences. It challenges reflection that focuses on specific aspects of the art of teaching, and encourages inquiry that analyzes teaching from a more complex perspective that includes thoughts and observations before, during, and after the event.

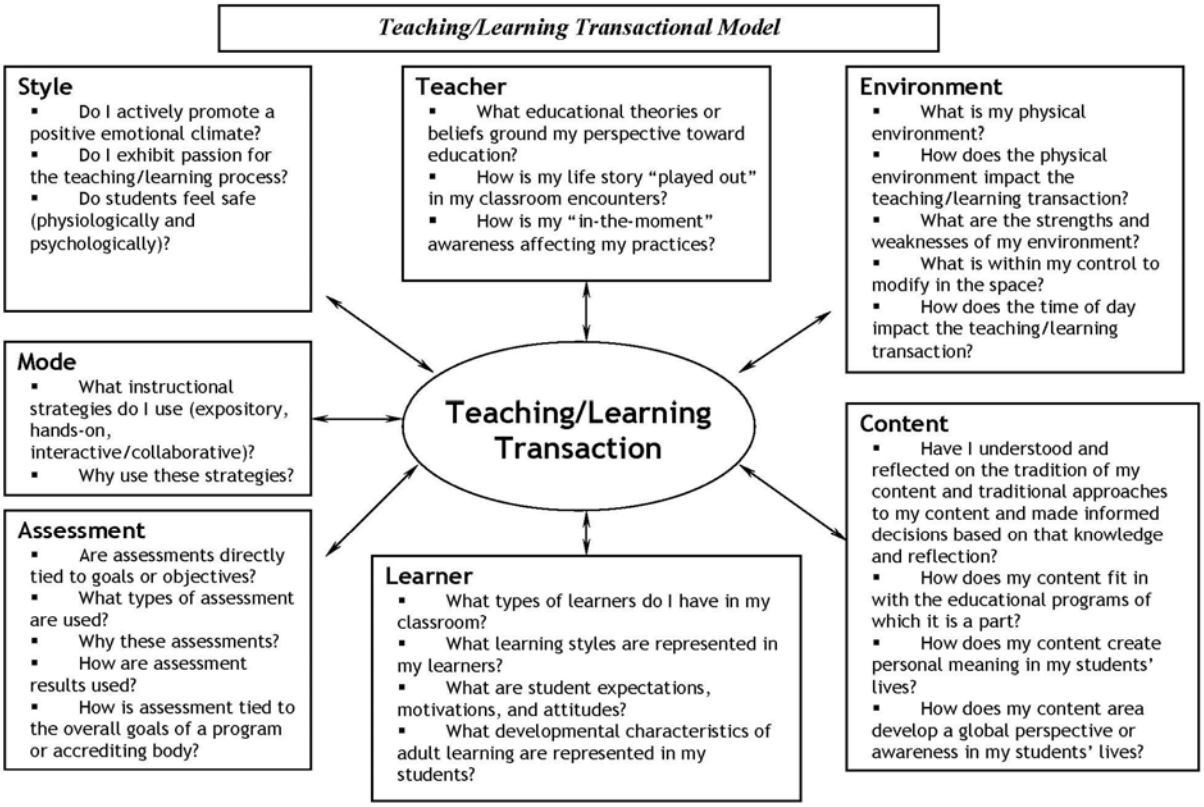
The Transactional Model of Teaching

The teaching/learning transaction is placed at the center in our model (Figure 1). Here "transaction" means the "back and forth" or "to-and-fro" quality of the teaching/learning experience so that each element of the model is not treated as a discrete and disconnected piece. Instead, individual elements expand and contract in the teaching moment as the context and the experience change. If the overall instructional transaction is the container, then the relative size of each piece within the container expands or diminishes as the transactions themselves change and develop. The transactional quality of teaching is true of both face-to-face and online transactions. Although the starting points and relative importance may differ, the set of elements that comprise a transaction is similar for each of these teaching situations. For example, an instructor may consciously focus on the fact that his or her students will be required to apply a specific concept during a professional assessment. At the moment when that concept is taught and discussed, assessment, style, mode, and content all interact and affect how the instructor will teach the given concept. Thus, there is a dynamic in-the-moment shifting of the elements as the teaching/learning transaction occurs.

In the T/LT model, teaching and learning are seen as two facets of one entity rather than as two separate entities. One of the primary aspects of quality teaching is the creation of an environment conducive to student learning. Without learning, teaching is merely an act of self-gratification. Quality teaching is the joining together of both teacher and student in the learning process. As educators, we learn both with and from our students. Thus, to characterize the interconnections between teaching and learning, these two concepts are represented together in an effort to capture the transactional nature of the quality teaching experience. In Figure 1, guiding questions that represent each individual category are presented. These questions are not necessarily the only questions we should consider within an element. They serve as starting points to begin the process of reflection. Individuals may develop and use their own questions that are relevant to their particular situation. The questions shown are meant to represent the inquiry perspective that encompasses a transactional understanding of teaching and learning.

Students have their own understandings and expectations of teaching and learning that may conflict, complement, or intersect with the teacher's understandings and expectations. The teacher's teaching/learning transaction model is a complex and interactive web that can interact with the students' teaching/learning perceptions to create an intricate and interrelated network of joint understandings and expectations as the teaching event ensues. It also may be true that both the student's and the teacher's models will grow in complexity, subtlety, and power over time. As we develop ways to understand both teacher and student models, we may be able to examine these changes. It is often said that tertiary level faculty members may begin by teaching the way they were taught. Often, this translates into lecture classes dominated by teacher talk (Brookfield & Preskill, 1999). Similarly, students often come to college with limited and naïve expectations about the roles of students and teachers (Miller, Bender & Schuh, 2005). If we are thoughtful and dynamic in changing our models of the teaching/learning transaction, our changes should, over time, be reflected in changes in

FIGURE 1
Teaching/Learning Transactional Model



how our students view the learning/teaching process. Thus, this teaching model provides a guide to purposeful reflection that is aimed at increasing both our students' and our own understanding of the teaching/learning event.

The T/LT model is designed to be used as a pre-, in-the-moment, and post-teaching event reflection guide. Before the teaching event, educators can use the model and the guiding questions to identify the complications and possibilities associated with teaching a certain concept in a specific manner within a given class. During the event, teachers can use the model as a way to monitor and categorize the individual thought processes and educational choices that occur while teaching. After the experience, the model is designed to serve as a guide for retrospective reflection encouraging the educator to consider the multiple and complex elements associated with the success or failure of a teaching experience. It can also serve as a guide for planning the next such experience.

The following section of this paper highlights the individual model elements. In each section a brief description of the element is given. Additionally, references are provided to guide the reader to further and more developed discussions of that particular issue. However, it is important to remember that each element needs to be considered and reflected on with reference to the other components of the model.

The Model Elements

Teacher. The "teacher" element of the model includes the personal history, expectations, and beliefs of the individual teacher. This element is the self-reflective and autobiographical part of the T/LT model. Teacher beliefs are a primary element in any instructional transaction (Ayers, 1995; Cole & Knowles, 2000; Norton, Richardson, Hartley, Newstead, & Mayes, 2005; Schönwetter, Sokal, Friesen, & Taylor, 2002; van Manen, 1991). This element encourages reflection that focuses on how personal perspectives, history, and beliefs about higher education impact decision-making processes. For example, if I have been socialized to believe that the role of a professor is to disseminate the "truth" of my content, I will define my role in the classroom quite differently from when I see myself as a guide who provides learning experiences that encourage the construction of knowledge about the content by the students. Both perspectives have strengths and

weaknesses. The goal of the model is to encourage reflection on how your personal beliefs influence the teaching transactions that occur in your classroom.

Quality teaching requires reflection as an on-going process. Thus, the teacher component of the model highlights the importance of reflection along several dimensions:

a) Understanding how our own life stories impact our practice.
b) Identifying our awareness of the in-the-moment factors that affect student learning.
c) Identifying how an individual teacher defines the role of a teacher in the process of learning.

Each of these dimensions impacts the definition of our teacher self and continues to shift and change with life experience. Thus, the dimensions require continuous reflection.

Style. The classroom manifestation of the teacher element is style. In the T/LT model the style element identifies the overall interpersonal climate of the classroom that is created by the teacher's behaviors, actions, and overall personality (Fenstermacher & Soltis, 1992; Grasha, 1996; Heimlich & Norland, 2002; Lowman, 1995; Opdenakker & Van Damme, 2006). Like trying to define a work of art, this is a complex and intuitive process that has long escaped in-depth study in higher education. Due to the culture of higher education that privileges the content domain as the primary purpose of a professor's work, many scholars have not considered the importance of the "feel" and "tone" of the educational encounter. After spending an hour and fifteen minutes in a dreary, monotonous classroom, however, one quickly sees the impact that style can have on the teaching/learning transaction.

Teachers' beliefs, attitudes, and philosophies are revealed in our classroom transactions with students. How we use humor, how we react to student questions or challenges, and a host of other variables all make up the style element of the T/LT model. Together they challenge us to examine our humanness as witnessed in our classroom attitudes towards students, content, and education in general.

Mode. The "mode" element identifies how the teacher chooses to design the experiences through which the students can learn the material. By mode we mean how the teacher translates the content and other factors into strategies, activities, and other elements of teaching. Lecture mode may be far different from discussion mode or a problem-based learning mode. As teachers, we have a growing repertoire of teaching methods available to us (Barkley, Cross, & Howell Major, 2005; Davis, 1993; Halpern, 1994; Herrington & Herrington, 2006). We must identify instructional strategies, learn how to use them effectively, and implement them. Although such instructional strategies are of critical importance to an instructional transaction, it is important to note that their ultimate effectiveness still depends on their interaction with the other elements of the teaching/learning transaction.

Content. The "content" element of the model addresses both the actual content of what is being taught (i.e. knowledge, information, and/or specific skills) and the pedagogical issues associated with teaching in a specific field of study. Most disciplines in higher education have traditions and knowledge about how they are best taught (Martin, Porsser, Trigwell, Ramsden & Benjamin, 2002; Shulman, 1986; 1987). In addition, educational research points to the fact that different kind of goals and objectives should be taught in different ways (Bain, 2004; Fink, 2003; Weimer, 2002). Basic concepts, for example, may be better learned differently from advanced problem solving in a field. The content element of the model examines the interplay between content knowledge and pedagogical practice.

Learner. The "learner" aspect of the model identifies issues of learning style, student expectations, motivation, and metacognition. The learners themselves are a key part of the instructional transactions. Students bring to a situation a set of styles, abilities, expectations, and attitudes that surely affect how the transaction proceeds (Dunn & Griggs, 2000; Gardner, 1983; Hativa, 2000; Kolb, 1984; Phillips & Soltis, 1998; Sarasin, 1998; Zull, 2002). Any teacher with more than minimal experience has found that what worked in a class in the morning can lead to a pedagogical disaster in a section of the same course in the afternoon. A different set of students may react completely differently to our most carefully laid plans.

Environment. The "environment" element deals with the space where the experience takes place. It includes a host of factors that may exist in the physical, social, or even virtual environment for learning and teaching. In the physical environment we may find factors such as the seating arrangements (whether the room allows the students to be grouped and arranged in a variety of ways, or is more rigid), the technology available (teacher's station with projector, Internet access, as well as wireless access and power supplies for student laptops), or basic human comforts, such as appropriate heating, cooling, or lighting (Bartlett, 2003; Douglas and Gifford, 2001; Niemeyer, 2003). The social environment may reflect the size of the class, its composition, and the relationships that develop among students and between students and instructor.

Converting a course to an online format does not remove the environment factor but does change it. The virtual environment may include the software and interface used to enable students to gather information and communicate. Different systems may work in very

different ways and, therefore, have effects on how a specific instructional transaction takes place. An example might be the differences in online discussions experienced through various systems, such as chat rooms, graphical chat rooms, and asynchronous discussion boards.

Assessment. The "assessment" component of the model clarifies how the ways we try to identify student knowing clearly impact the teaching experience. It is important, however, not to separate assessment too sharply from the learning/teaching transaction, as naïve teachers may tend to do. There are several reasons for this. First, student expectations of how they will be assessed and on what knowledge and skills, are critical factors in determining how they approach the learning process (McKeachie, 2006; Sander, Stevenson, King, & Coates, 2000; Taras, 2003). Second, a good assessment can be the place where students learn the most, especially if it is well integrated into the instructional transaction (Gronlund, 1998; Haladyna, 1997; Ooseterhof, 1996). In addition, how the teacher chooses to find out about student knowledge and learning can have profound effects on how he or she approaches the transaction itself, both in the planning and in the moment.

We contend that the T/LT model requires that we see its constituent parts together in their context. The model provides a conceptual framework from which to reflect on personal practice before, during, and after the teaching event. In an effort to demonstrate the application of this reflective process, an illustrative scenario is created to provide insight into the use of this model.

An Illustration of the Model in Action

Pre-Event Reflection

David is an Assistant Professor in education at a large Midwestern university, with thirteen years' experience. Over the past few months he has become keenly interested in a deeper understanding of the learning that occurs in his classroom. To begin his reflective process using the T/LT model, David considers the following questions:

- Which one of the teaching/learning transactional elements categories do I think is my strongest area?
- Why do I think this is my strongest area (education, personal background, etc.)?
- What evidence (student evaluations, intuition, etc.) do I have that this is my strongest area?
- In which of the teaching/learning transactional elements do I need the most improvement?

As David considers these questions, he notes that his strongest areas are the teacher and style components of the model. Having won teaching awards in the past and having consistently received positive student evaluations, David believes his students like him and respect his knowledge of the field. However, he has become concerned about how much his students are internalizing the course concepts and actually trying to apply these ideas to their professional and personal lives. He wants to identify how his students are internalizing the content. The model has made him realize that he needs to think more about the relationship between content, mode, and the learner. He considers the following question: How are my actions in class allowing students to internalize and create personal meaning with the course material? As he reflects on this question he decides to try a different approach in his next class session.

In-the-Moment Reflection

This class is a sophomore level teacher education course in which students are exposed to a variety of complex educational theories regarding public education. David has been frustrated in the past with the fact that students seem to be able to recall and identify which concepts are associated with which theorists, but they do not seem to be understanding how a theory leads to an educational practice. For this session, he wants to create an event that will explore this idea.

He begins the class with a mini ten-minute lecture that outlines the concepts and concerns of Paulo Freire. Freire's (1970) goal of personal reflection is to encourage oppressed individuals to become cognizant of their oppression and to identify the ways in which the structure of their environment has allowed this to occur. Students intellectually understand this concept and are very savvy at identifying Freire's ideas on a quiz or exam. But, do they really understand how to practice this level of awareness? David decides to try an activity to bring this concept to life.

After the short lecture, David informs the students that he wants them to view a video of an eighth grade science class in which the teacher is teaching "Newton's Law". David asks his students to imagine that they are either a student or the teacher in this video. His students' first goal in this activity is to create a list of words and/or phrases that represent what they believe the students and/or teacher think and feel as they explore Newton's Law.

David's students begin watching the tape of this eighth-grade classroom. The teacher in this video was utilizing a lecture approach, mixed with probing questions, as she teaches the content of Newton's Law. As the students watch the tape, David became

conscious of the fact that he was focusing on how his students are analyzing this video. He notices that when he is teaching, he really watches students' eyes and reactions to the material they are discussing. He begins to wonder if this is why he feels he is so confident in the "teacher" and "style" component of the model. Much of his awareness is on the students' emotional responses to activities and material.

After watching the video and creating a list of words and/or phrases that captures this experience, David then instructs his students to use this list as inspiration to create an imaginary dialogue between the teacher and the students in the video. David challenges his students to try to capture the voice of the student and/or teacher and truly represent what it feels like to be in this classroom or to teach in this manner. David allows the students to either work alone or in small groups as they create a dramatic interpretation that brings their chosen perspective (student or teacher) to life. Four of the students work alone and write monologues. The other students work in groups of two or three and utilize a more dialogic approach. All of the students, except for one, take the perspective of the students in the video.

As David listens to the groups create their dramatic interpretations, Brookfield's (1995) challenge rings in his head. In Brookfield's text, he notes that when teachers "check in" on groups it may send a signal that the teacher does not trust the students to do the work on their own. This practice may also intimidate some students or encourage them to perform for the teacher. David sits back and waits. He wants to jump in and add to the discussion of the groups. He wants to see what the students are writing. But he waits.

As he waits, he notices a strange emotional response within himself. He is excited and anticipates getting back to the class discussion. He remembers that this is the same feeling he had before he entered the stage as an actor years ago. Waiting backstage for your entrance is both exciting and fear inducing. As an actor, David wanted to just run on stage and become a part of the show. But, waiting for the right cue is crucial. He begins to think that maybe the reason he has not missed acting or directing plays is because he is getting an artistic and creative fulfillment through his classroom encounters. Has his classroom become his theatre space? He jots a note to himself to think on this further after class.

After a few minutes the students read and "perform" their dialogic creations. Without question, they capture the voices of the students. As the class listens and enjoys the performances that are very critical of this teaching style, David asks them probing questions to identify how they are internalizing this information in terms of their future professional practice. For example, one exchange was as follows:

David: Why do you suppose the teacher would use lecture as her primary mode of instruction?

Student One: Because of the time crunch…teachers only have 45 minutes to teach concepts in this class…so she has to lecture to cover everything.

Student Two: Or maybe it's the achievement tests….this teacher has to make sure she has covered everything so the students can pass the test.

Student Three: Yes, I mean, she has to cover all of these standards and outcomes that will be on these tests…she is trapped.

This discussion was very pleasing to David. His students recognize how outside pressure and social structures influence and affect classroom practices. As the conversation continued other students note there may be social pressure to conform to teaching in specific ways. The students also address how money and social efficiency may influence the design of our schools and, in turn, impact how we are able to teach. The discussion of these issues allows David to identify how his students are analyzing the impact that social structures have on personal practice. The students recognize how the structure of the environment, if oppressing, can lead to oppressive practices. Additionally, the students realize that if they become aware of this structure, they may be able, through thoughtful practice, to teach in a manner that is not as restrictive. From the conversation that followed the video analysis, David feels that his students not only understand the ideas of Freire, but they now recognize how applying a theoretical perspective can lead to a change in professional practice.

Post-event Reflection

David was very happy with the tone and feel of the class. He felt that the students had an understanding of the ideas and concepts of Freire and were able to connect this perspective to their future practice. When using the model for pre-reflection, David had realized he needed to consider the connection between student learning and content. By focusing on these elements within his classroom he began to consider a different and alternative mode to connect the elements in the teaching/learning transaction. In the post-reflection, he feels very confident about the success of the video analysis.

Using the T/LT model for post-reflection, David is now able to look at the classroom from a more holistic perspective. As he considers the event, he begins to see that there is a structure to this mode of practice: he began with content coverage (mini-lecture), moved to a real experience (tape of teaching), then to student

application (student monologues and dialogues), and finished with a reflective summary. As he used the T/LT model to guide his post-event reflection he realizes that this pedagogical approach encouraged a broader range of experience and reflection for his students. He also realizes that the T/LT model is encouraging him to consider multiple elements of the teaching event. As David reflects on all of the model elements he recognizes that he did not consider issues of assessment. In the future he must reflect more on how assessment is connected to the teaching event. He also sees in his post-event reflection that he did not consider and reflect on the environment of the classroom, and that in the future more consideration needs to be given to this element. However, the elements David considered (learner, content, mode, style, and teacher) did provide some informative insights into his overall teaching.

From the learner perspective, David realizes that this activity addresses various learning styles at different points of the event. From the content perspective, he addresses the reflective question of creating personal meaning in the students' lives. In the domain of mode, he has reaffirmed his belief that in many ways, how we structure the event can dictate what students experience and remember. Within the style component, David recognizes that he has a passion for this way of teaching because he believes in creating meaningful aesthetic experiences in students' lives. This passion was clearly seen in his activities today. Finally, as he reflects on the teacher element, David is drawn by his in-the-moment reflections that focused on theatre and student connections. This element he will reflect on even further.

David is fascinated by how much of his reflection in the moment is based on the "experience" that students are having in his class. When he focuses on student learning, he keys into their expressions in the teaching/learning transaction. As he considers his own work, he notices that he was identifying his own emotional response to the experience and relating back to his theatrical background. Could it be that his teaching has filled this artistic void in his life? This is an in-the-moment question he wants to explore further.

To David, theatre is about experience. The role of a theatrical encounter is to take a given piece of content (script) and to create an environment where the meaning and interpretation of this content comes to life. For him, this classroom approach accomplished this task. He was able to take the content of Freire and create a real experience, that, in turn, the students were able to engage with, and create their own aesthetic response to the event. This aesthetic mode of reflection has always been important for David, and now he sees that when he teaches this way he is more comfortable, and in turn, feels he creates a better learning experience for his students. From his post-event reflection, David realizes he needs to be committed to teaching in this manner. He needs to provide a framework for the content, create an experience for the students that brings the idea to life, and then find a way to have the students reflect on this experience as they connect the content to their personal lives. David also realizes, through this reflective process, that his background and passion for theatre explains why he is so confident in the style and teacher elements of the model. Theatre is about creating passionate connections to the material (style) and also reflecting and identifying "in-the-moment" what is being communicated in the space (teacher). David's pre-, during, and post-reflection has encouraged him to continue to create these educational "events" in his classroom. Using the T/LT model as a guide for reflection has also reminded David that he needs to think more about assessment and environment in his future practice.

In this illustrative case study, the elements of the T/LT model interconnect and interact with one another even as we focus on individual components. When teaching is viewed from this perspective, we can begin to re-frame the relationships between elements involved in teaching while developing new questions to consider. Through the reflective process encouraged by the model, David has recognized and scrutinized some of the tacit decisions affecting his teaching practice. He has also developed possible explanations for his strengths in teaching while also recognizing areas of improvement.

Conclusion

The teaching/learning transactional model represents a shift in perspective in the study of teaching. Rather than focusing on individual elements of the teaching process, this model challenges educators to view teaching as a holistic process. In addition, the model provides a framework to guide pre-, in-the-moment, and post-teacher reflection. We are currently exploring the use of the model in a variety of settings.

First, in order to encourage deeper reflection about teaching among higher education faculty, we have developed a peer review process to guide pairs of colleagues in working together to examine teaching. It focuses on one person at a time and provides a process and a set of starting questions for the duo to reflect on together before one of them observes a teaching transaction led by the other. After the observation, the two come together again to reflect more on what was observed before the reviewer writes a reflection to capture her/his understanding of the reviewee's teaching as holistically as possible. Not only is this process expected to deepen and strengthen the peer review that goes on, we also hope that it will draw more

people into the adventure of understanding teaching. We are currently gathering data on the use of the process, which will lead to new case studies and other reports on a variety of professors and their teaching/learning transactions, both successful and unsuccessful.

Second, we have begun to use the model in other ways as a faculty development tool. Learning communities at the authors' home institution, Kent State University, have begun to use it to discuss teaching ideas. Often these discussions are followed by pairs of members reviewing one another's teaching using the process mentioned above. Later group discussions are enriched by the reflections and ideas that result.

Third, this paper focused on using the model to guide the reflections of faculty members about their teaching. The T/LT model, however, is meant to emphasize both the teaching and the learning. The student is an element of the model every bit as important as the teacher. We are looking at examining the teaching/learning transaction from the point of view of students as well, through focus groups and other means. As we gain in our ability to understand the teaching/learning models of both faculty and students, we may be able to research how their understanding interacts and changes over time.

Finally, we are exploring the use of the model in understanding K-12 teaching and in preparing teachers for that arena as well. These efforts have just begun, but they should lead to more understanding as well as further reports in the literature. The next step will be to examine whether reflecting on teaching using this model as a guide leads to better teaching and, especially, better learning.

Through all these efforts we hope to improve and deepen the model and the reflection and review processes that are coming from it. The model is not meant to solve all teaching problems, but it can serve to change our understanding of the teaching/learning transaction, to change the language we use to discuss teaching, and to allow us to take on new perspectives. The T/LT model is designed to encourage a dialogue that frames teaching as it is: a complex encounter of the human experience. We invite comments and improvements on the model as it develops.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 140-153
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Adoption of Educational Technology: How Does Gender Matter?

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Gender differences have attracted attention in today's educational research and practice. Very few studies, however, explore the gender differences in the use of technology in higher education. The authors conducted a study on technology adoption at a large Canadian university. One of its purposes was to inform our understanding of how gender matters in the process of technology adoption in post-secondary teaching. A survey was administered to all full-time faculty and sessional instructors. Results suggest that females were more likely to use student-centered pedagogical approaches in teaching than males. Females had lower confidence and less experience in the use of computers in teaching. They tended to learn how to use technology from others, whereas males were more likely to learn from their own experience. Based on these findings, the paper recommends that professional development for females should involve more showcases and interactions while training for males would be more appropriate when it provides many hands-on activities.

Over the last two decades, computer technology has been changing many aspects of higher education including administration, recruitment, and the way of teaching and learning. The adoption of technology at post-secondary institutions has therefore become an important research topic. Among the reported studies, many focused on the barriers and incentives for the use of technology in higher education (Adamy & Heinecke, 2005; Ebersole & Vorndam, 2003; Green, 1998; Jacobsen, 1998; Nantz & Lundgren, 1998) or professional development that facilitates university instructors to use technology (Barone & Hagner, 2001; Stephens & Hartmann, 2004). Very few of them, however, pay attention to the faculty differences in the process of technology adoption. Since individual differences have attracted great attention in today's educational research and practice, the authors believe that a better understanding of faculty differences will benefit our effort in promoting technology integration at universities.

The authors conducted a study on technology adoption at one large Canadian university. This university adopted a technology strategic plan about 10 years ago. One of its goals was to facilitate a 50% WebCT adoption rate by 2005/2006. During the past 10 years, a couple of units were set up on campus to promote the use of technology by providing technical support and instructional design services. It was the purpose of this study to check the current use of technology on campus. This paper reports those findings that particularly address the following research question: How does gender matter in the process of technology adoption?

Theoretical Framework

During the last two decades, studies have documented gender disparity in the use of computers at different settings. For example, in schools, earlier studies found that male students, compared with their female peers, had more access to computers, felt more confident with their computer skills, and showed more positive attitude toward computers (Chen, 1986; Collise, 1985; Shashaani, 1994). Nelson and Watson (1995) reviewed research studies on gender differences in computer-based education and concluded that significant gender differences existed in regard to the equality of access and performance outcomes, and this disparity appeared to start as early as preschool where males consistently spent more time in computing activities than their female peers. Chen (1986) examined gender differences in computer attitudes and experience of adolescents. The study found that males were more interested in and more confident with computers than females. It also suggested a differential in the use of computers, finding that males had greater exposure to computers both in formal instructional settings and informal settings. Collis (1985) surveyed a large number of secondary school students and found that these attitudinal differences were clearly established by grade 8 and males spent more time with computers outside of class than females. Shashaani (1994) studied over 1700 students in secondary school and suggested that computer experience has a direct relationship with computer attitude. In her study, males had more computer experience and showed more positive attitudes. Some recent studies demonstrate that the gender gap has shrunk and has even reversed at certain grades. Volman, van Eck, Heemskerk, and Kuiper (2005) surveyed and interviewed students from elementary and secondary schools. They found that gender differences, especially in primary schools, appear to be small. In secondary schools, the computer attitude of girls is only slightly less positive than that of boys. Based on a trend analysis of data gathered from ten thousand school students in grades K-12 over the first five years of this century, Christensen, Knezek, and Overall (2005) and Collis et al. (1996) found that

boys and girls begin first grade with few or no difference in attitudes toward computers. By grades 4 and 5, girls are more positive in their enjoyment with computers. Starting about grade 6, girls' self-reported computer perception begins to become less positive than boys, and by grade 8 becomes significantly lower than boys. It is safe to conclude that even though today's elementary school kids may not show many gender differences in computers, boys in secondary schools still like computers more and are more confident to use them than girls (Colley & Comber, 2003; Vale & Leder, 2004).

The number of studies on gender differences in university settings is much smaller than in school settings. Most available studies report that gender is a significant factor in post-secondary learning. Koohand (2004) investigated university students who were enrolled in an undergraduate hybrid programm regarding their perceptions towards the use of a digital library and found that males had significantly higher positive perceptions than females. Enoch and Soker (2006) examined students' use of web-based instruction at an open university. They found that there had been a continuous increase in use of the Internet for both female and male students. However, the differences between the two gender categories were still significant and quite large. Male students were more likely to use web-based materials as an addition to the printed materials. Williams, Ogletree, Woodburn, and Raffeld (1993) reported that male college students, compared with females, experienced more computer involvement in their daily lives and perceived themselves as more competent with computers. However, some studies did not reveal significant gender differences. For example, Zhang (2005) found that gender was not a significant factor in terms of college students' receptivity for distance learning. Davis and Davis (2007) reported that no statistically significant difference was found on overall perception of computer competence based on gender

Studies on the use of computers by males and females in workplace and household settings have told a similar story. Earlier studies revealed that, in general, women seem to have less experience with computers and tend to be less skilled in the use of computers (Harrison & Rainer, 1992). In addition, women seem to suffer greater levels of computer anxiety (Igbaria & Chakrabarti, 1990). The more recent studies claim that these gender differences have shrunk. For example, Morris, Venkatesh, and Ackerman (2005) studied over a half year the reactions and use behaviors among 342 workers being introduced to a new computer application. They found that gender effects in individual adoption and use of technology differed based on age. Specifically, gender difference in technology perceptions became more pronounced among older worker, but a unisex pattern of results emerged among younger workers. Ono and Zavodny (2005) conducted a comparative study between USA and Japan. They found that there were significant gender differences in computer and internet usage in both countries during the middle 1990s. By 2001, these gender differences had disappeared in the US but persisted in Japan. However, controversy exists in regard to the recently reported smaller gender differences. Some recent studies still document fairly visible gender differences. Schumacher and Morahan-Martin (2001) found that in general, men tend to have more favorable attitudes toward computers. Ong and Lai (2006) surveyed 156 employees from six international companies in Taiwan and found that men's rating of computer self-efficacy, perceived usefulness, perceived ease of use, and behavioral intention to use e-learning are all higher than that of women.

While many studies have investigated possible gender differences among school students, university students, as well as adults in workplace and household settings, very few studies have addressed gender differences related to faculty use of educational technology in higher education. The available studies have even portrayed a contradictory picture. Spotts, Bowman, and Mertz (1997) found that male faculty reported greater knowledge and experience in computer technology. This difference was also reflected in their responses to the factors influencing the use of educational technology. In their study, females rated ease of use, time to learn, and training as more important factors than males. Thompson and Lynch (2003) reported that, compared to women faculty, men were significantly more likely to express confidence in their ability to organize and execute courses of internet actions. However, Anduwa-Ogiegbaen and Isah (2005) did not find any significant difference between male and female faculty in their internet usage. Gerlich (2005) found gender plays little role in faculty perceptions of teaching online. Parry and Wharton (1995) found that male faculty do not use network more than females.

Scholars who believe in gender differences have tried to provide explanations for their existence. Cockburn and Ormond (1993) claim that technology has traditionally played a gendered role in the western society. In the area of information technology, males are main designers and developers. This may cause a mismatch between technology and women's learning, working and living styles. For example, Wilson (1992) found that the language used in technology fields is male-oriented. This may alienate females and prevent them from participating in these fields. Campbell and Varnhagen (2002) argued that some computer applications in education such as self-paced tutorials

may not work for the benefit of women who are more relational learners than males. Gender stereotype does not favor women either in the use of technology. Some studies suggest that the higher computer anxiety of girls is related to the sex bias of teachers, who were found to make more eye contact with boys when discussing technology and computers (Okebukola, 1993). Since university faculty may haven been affected by consistently reported gender-related barriers, one can hypothesize that male faculty have advantages over female faculty in their skills, perspectives, and use of educational technology. However, this prediction does not exactly match what current studies inform us. This study is significant because it has the potential to contribute to the debate over whether or not gender differences exist in faculty use of technology.

An instructor's concept of teaching has an impact on how he or she uses technology (Mitchem, Wells, & Wells, 2003; Zhou, Brouwer, Nocente, & Martin, 2005). Studies on faculty pedagogy suggest that female faculty tend to embed curricular and instructional decisions in their students' personal experiences and understanding (Elijah, 1996; Lacey, Saleh, & Gorman, 1998; Robin & Harris, 1998). They may be less concerned with control and more inclined to prefer teaching and learning decisions constructed by learners (Lacey, Saleh, & Gorman, 1998). In more detail, females were described to prefer, to a greater degree than males, student-centered teaching approaches such as class discussion, cooperative learning, fieldwork, group projects, student-developed activities, and peer assessment (Park, 1996). Since the literature has demonstrated the gender differences in pedagogy, we hypothesize that males and females would perceive and approach technology differently. This difference, compared with gender differences in knowledge and skills of computers, is more subtle and therefore harder to explore. Very few studies have been done in this area. One exception is the study of Campbell and Varnhagen (2002). They argue that, since females are more likely to prefer interactive instructional methods, those technologies that support increased interaction and participatory networks are more likely to appeal to female faculty.

Methods

All full time faculty and sessional instructors at the studied university were invited to complete an online survey. The survey used Likert scale, ranking, yes/no, fill-in-the-blank, and open-ended questions. It had 30 questions, but most of them included multiple components. The survey took approximately 30 minutes to complete.

The survey consisted of three parts. The first part assessed university instructors' concept of teaching from four aspects: use of student-centered teaching approaches, understanding of teaching, goals of teaching, and criteria for the measurement of teaching success. Participants were first asked to report how frequently they used student-centered teaching approaches (e.g. encouraging students to share ideas with neighbors in the classroom) by picking a response on a 1-3 scale: (3) whenever applicable, (2) not always when applicable, and (1) never. Then participants were provided with several statements that describe the nature of teaching (e.g. to teach is to facilitate students' learning). They were asked to rank these statements from 1 (most descriptive) to 5 (least descriptive) based on the extent to which each statement describes their understanding of teaching. Instructors' understanding of teaching goals was assessed using a Likert scale from (1) much less important to (5) much more important. They were asked to compare the importance of several high order goals (e.g. develop students' critical thinking skills) with the goal of teaching subject content. At the end of the part one, participants were asked to consider the importance of several criteria for the measurement of their teaching success (e.g. students' marks in exams) on a Likert scale from (1) not at all important to (5) very important.

The second part of the survey focused on instructors' current use of computers, expertise with computer technologies, perceived impacts of computers on teaching and learning, factors influencing their use of computers, barriers to the use of computers, experiences and preferences in professional development. Participants were asked how long they had used computers in teaching. Possible responses were rated on a 1-4 scale: (1) never, (2) less than two years, (3) between two and five years, and (5) more than five years. Their comfort with the use of computers was assessed with a Likert scale from (1) not at all comfortable to (5) very comfortable. Participants were asked to report their expertise in various computer technologies, such as web searching, course management system, and spreadsheets, by indicating a level on a scale: (1) none, (2) little, (3) fair, (4) substantial, and (5) extensive. Participants were then provided with a number of statements describing the impacts of computers on teaching and learning in higher education, and various statements about factors that motivate instructors to use computers. They were asked to indicate their agreement or disagreement with these statements on a Likert scale from (1) strongly disagree to (5) strongly agree. Regarding the barriers to the use of computers, participants were asked to report the importance of each barrier by indicating a level on a Likert scale from (1) not at all important to (5) very important. At the end of the part two, the survey assessed the importance of common sources such as workshops and courses for instructors acquiring

TABLE 1
Demographic Data (Sample and Population)

Demographics		Sample	Population
Gender	Male	56	52
	Female	44	48
Age	Younger than 35	17	10
	36-45	33	32
	46-55	33	34
	Older than 55	17	24
Rank	Full professor	29	33
	Associate professor	24	14
	Assistant professor	18	19
	Sessional instructor	29	34

knowledge and skills to use computers in teaching. Participants were asked to pick a level on a Likert scale. They were also asked to rank their preference among these sources.

The third part of the survey collected demographic information including gender, age, position, and subject area. At the end of the survey, a couple of open-ended questions provided participants with an opportunity to give more detailed feedbacks on any topic covered in the survey.

Data analysis was conducted for the following variables: participants' concept of teaching, comfort and experience in the use of computers, expertise in computer technologies, perceived computer impacts on teaching and learning, motivations for the use of computers, barriers to the use of computers, and experience and preference in professional development. These variables were compared between males and females using t-tests or Chi-square tests, depending on the nature of each variable. The analysis was validated by at least two researchers.

Results

A web link for the online survey was sent through an automatic email dispatch program to approximately 2500 email addresses in April of 2005. These email addresses were provided by the Department of Human Resources with a mixture of all full time faculty members (1376), sessional instructors (729), and graduate assistants. The cover letter that went along with the survey was addressed to faculty and sessional instructors only. In other words, we only expected return surveys from 2105 faculty and sessional instructors. A total of 341 valid surveys were received. The return rate was approximately 16.2%. Participants came from all Faculties on campus. Their demographic data are reported in Table 1 along with the population data, which were obtained from the university Data Books. Male instructors, instructors younger than 35 years old, and associate professors are slightly over-represented in the sample. Findings therefore need to be interpreted with caution.

Male participants had an average of ten years of teaching experience while females had eight. However, this difference was not statistically significant. There was no significant age difference either between male and female participants. The average age fell at the middle point between the choices 3 (36-45 years old) and 4 (46-55 years old). Their teaching load was similar as well with an average of two courses for one semester.

Concept of Teaching

Participants were asked to report how frequently they used student-centered teaching strategies. T-test results demonstrate that, compared with male participants, females more frequently applied student-centered teaching strategies such as "encourage students to share ideas with neighbors in classroom," "engage students in small group discussion," "question student ideas before introducing new concepts or providing solutions," and "students' presentations." Females also tended to "engage students in small group work" more frequently than their male colleagues although this difference was not statistically significant. Females and males had no significant difference in their frequencies of using "hands-on activities" (Table 2).

Regarding instructors' understanding of the nature of teaching, participants were asked to rate how descriptive each of the following five statements was of their understanding: (a) I am the subject knowledge authority in the classroom, (b) To teach is to pass on knowledge to students, (c) To teach is to facilitate student learning, (d) My primary job is to explain the subject as clear as possible, and (e) My primary job is to create an environment for learning to occur. Statements (a) and (b) represent a teacher-centered perspective of teaching and (c) and (e) reflect a student-centered perspective while (d) falls between these two perspectives. Participants' number one rank, the most

TABLE 2
The Use of Student-centered Teaching Strategies

		Mean	SD	t	p
Encourage students to share ideas with neighbors in classroom	Male	2.50	0.73	-3.69	0.00**
	Female	2.77	0.51		
Engage students in small group discussion	Male	2.40	0.79	-2.76	0.00**
	Female	2.63	0.63		
Question student ideas before introducing new concepts	Male	2.48	0.65	-2.16	0.03*
	Female	2.63	0.56		
Students' presentations	Male	2.31	0.78	-2.29	0.02*
	Female	2.51	0.77		
Engage students in small group work	Male	2.50	0.74	-1.79	0.07
	Female	2.65	0.65		
Use hands-on activities	Male	2.32	0.80	-1.27	0.20
	Female	2.44	0.81		

Note. 1 = Never, 2 = Not always when applicable, 3 = Whenever applicable. *p < .05, **p < .01

TABLE 3
Participants' Understanding of Teaching

		Mean	SD	t	p
Most descriptive statement for teaching perspective	Male	2.62	0.70	-0.29	0.76
	Female	2.64	0.70		

TABLE 4
The Importance of High Order Teaching Goals Relative to Teaching Content

		Mean	SD	t	p
Facilitate student intellectual development	Male	2.67	0.54	-2.13	0.03*
	Female	2.79	0.47		
Relate subject matter to social issues	Male	1.74	0.77	-5.10	0.00**
	Female	2.19	0.78		
Develop students' critical thinking skills	Male	2.77	0.49	-1.78	0.07
	Female	2.85	0.37		
Prepare students for a specific career	Male	1.68	0.82	-1.86	0.06
	Female	1.85	0.85		
Relate subject matter to other courses or subjects	Male	2.00	0.77	-1.87	0.06
	Female	2.17	0.81		

Note.1 = Much less important, 2 = Less important, 3 = Just as important, 4 = More important, 5 = Much more important. *p < .05, **p < .01.

descriptive statement, was selected as an indicator to the estimation of their understanding of teaching. The participants were scored 1 if they chose statements (a) or (b) as their most descriptive statement. The participants who picked up statement (d) were scored 2. The rest who considered statements (c) or (e) were scored 3. A t-test for this variable does not show a significant gender difference (Table 3).

Participants were asked to compare five high-order teaching goals with the goal of teaching subject content. As Table 4 reports, females had a higher means than males on each of these five goals, which means they tended to consider, to a higher degree than males, the importance of these goals. This gender difference was significant for two goals, "facilitate student intellectual development" and "relate subject matter to social issues," but not for the other three.

Regarding the criteria university instructors used to measure their success of teaching, t-test results show that significant gender differences existed for three criteria: students' ratings of instruction, students' active involvement in the course, and students' attendance in class. Females were more likely to consider the importance of these three criteria. There were no significant gender differences for the rest two criteria: students' mark in exams and students' increased interest in the subject (Table 5).

In order to compare male and female instructors' overall understanding about teaching, nine selected questions addressing the four studied aspects of

TABLE 5
Criteria to Measure the Success of Teaching

		Mean	SD	t	p
Students' ratings of instruction	Male	2.03	0.80	-2.86	0.00**
	Female	2.27	0.71		
Students' active involvement in the course	Male	2.87	0.38	-2.46	0.01*
	Female	2.95	0.21		
Students' attendance in class	Male	2.31	0.74	-5.68	0.00**
	Female	2.72	0.56		
Students' increased interest in the subject	Male	2.91	0.32	-1.23	0.21
	Female	2.94	0.23		
Students' marks in exams	Male	2.19	0.68	-1.65	0.09
	Female	2.32	0.67		

Note. 1 = Not at all important, 2 (unmarked), 3 = Somewhat important, 4 (unmarked), 5 = Very important. *p < .05, ** p < .01.

TABLE 6
Participants' Concept of Teaching

		Mean	SD	t	p
Concept of teaching	Male	23.56	2.81	-4.10	0.00**
	Female	24.72	2.14		

FIGURE 1
Comfort Level with the Use of Computers in Teaching

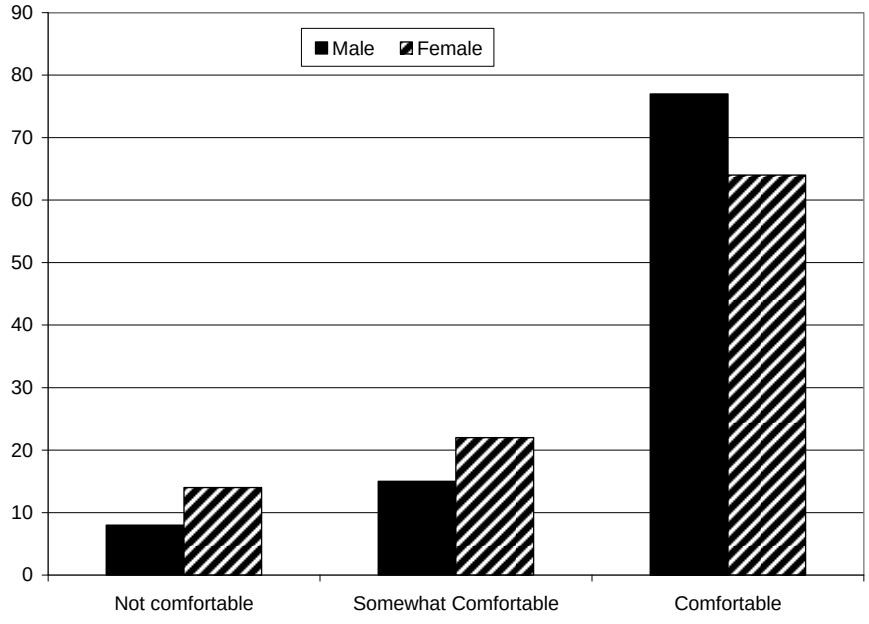

TABLE 7
Comfort and Experience with the Use of Computers in Teaching

		Mean	SD	t	p
Comfort with the use of computers in teaching	Male	4.23	1.05	2.94	0.00**
	Female	3.85	1.22		
Compare the use of computers with colleagues	Male	3.77	1.08	1.86	0.06
	Female	3.55	1.03		
Years of using computers in teaching	Male	3.49	0.65	2.65	0.00**
	Female	3.27	0.72		

Note. **p < .01.

teaching concept were selected and clustered into to one variable. In specific, four statements about teaching strategies (Table 2) were selected: "encourage students to share ideas with neighbors in the classroom," "engage students in small group discussion," "question students' ideas before introducing new concepts or providing solutions," and "use hands on activities." We did not select "engage students in small group work" and "students' presentations" because they were represented by the four selected strategies. Two high order teaching goals (Table 4) were selected: "developing students' critical thinking skills" and "facilitate students' intellectual development." The rest three goals were not selected because they were not as strong indicators as the selected questions in determining whether instructors had a student-centered or teacher centered concept of teaching. For a similar logic, two of the five criteria for teaching success (Table 5) were selected: "students' active involvement through the course" and "increased interest in the subject among students." Participants' number one rank, the most descriptive statement for their understanding of teaching (Table 3), was selected as the ninth contributor to the estimation of their concept of teaching.

To make all nine selected questions use the same kind of scales, the five scales were compressed to three scales. Specifically, for the questions about teaching goals, the two scales at the negative end namely "much less important" and "less important" were combined into one scale "less important (1)." The middle scale "just as important" still stayed in the middle (2). The two scales at the positive end, "more important" and "much more important," were combined into "important (3)." A similar operation was applied to the Likert scale used in the criteria questions about the measurement of teaching success.

The clustered measurement of teaching concept has therefore a minimum value of 9 and maximum value of 27, with the small number end representing a teacher-centered teaching concept and the big number end for a student-centered teaching concept. T-test results show a significant gender difference in participants' concepts of teaching (Table 6). Females were more likely to have a student-centered concept of teaching than males.

Use of Computer Technology

Comfort and Experience in the Use of Computers. Approximately 92% of males and 87% of females reported that they had used computer technologies in teaching. A Chi-square test shows that this difference was not significant. Participants were asked to report how comfortable they were with the use of computers in teaching. After compressing five levels into three, approximately 77% of males felt comfortable; 15% felt somewhat comfortable; and only 8% did not feel comfortable. In contrast, approximately 64% of females report comfortable, 22% somewhat comfortable, and 14% not comfortable (Figure 1). The t-test results show that males reported a significantly higher comfort level with the use of computers (Table 6). Participants were asked to rate their use of computers in teaching compared with their colleagues. A Likert scale from "well below average (1)" to "well above average (5)" was provided. While males tended to rate their use of computers higher than females, this gender difference was not significant (Table 6). Participants were asked to report how many years they had used computers in teaching. A t-test on participants' responses to this question demonstrated that males reported significantly more experience than females in the use of computers in teaching (Table 7).

Computer Expertise. Participants were asked about their expertise in using a variety of computer tools including web searching, webpage development, course management system, database, spreadsheets, presentation software, drawing or photo programs, listservs, and discussion board. Males reported a higher level of expertise in all these tools except discussion board. Statistically significant differences existed in the following computer tools: webpage development, spreadsheet, and drawing or photo programs.

Perceived Impacts of Computers. Participants were asked about how they agreed or disagreed with several statements describing the potential influences of

TABLE 8
Expertise in Computer Tools

		Mean	SD	t	p
Web searching/browsing	Male	4.42	0.73	1.63	0.103
	Female	4.28	0.82		
Presentation package (e.g. PowerPoint)	Male	4.12	0.99	1.52	0.12
	Female	3.93	1.20		
Spreadsheets	Male	3.65	1.17	3.52	0.00**
	Female	3.16	1.29		
Drawing/photo program (e.g. Photoshop)	Male	3.23	1.25	4.73	0.00**
	Female	2.56	1.27		
Database	Male	2.95	1.30	0.66	0.50
	Female	2.85	1.34		
Webpage creation, editing, publishing	Male	2.96	1.45	4.57	0.00**
	Female	2.25	1.25		
CMS (WebCT, Blackboard, etc.)	Male	2.65	1.25	-0.01	0.98
	Female	2.65	1.38		
Listserves, News groups	Male	2.57	1.26	0.62	0.53
	Female	2.48	1.34		
Discussion board	Male	2.24	1.36	-0.838	0.40
	Female	2.37	1.39		

Note. 1 = None, 2 = Little, 3 = Fair, 4 = Substantial, 5 = Extensive. *p < .05, **p < .01.

computers on teaching and learning (Table 9). The t-test results revealed that males and females responded with no significant differences to five statements. However, males and females gave significantly different responses to two statements, "students can learn the material more easily or thoroughly" and "faculty are better able to present more complex material to students." Males, compared to females, were more likely to think computers could help them to teach and students to learn the course materials better.

Motivations for the Use of Computers. Participants were asked about their agreement or disagreement with various motivators for their use of computers. Males and females had very similar responses for all motivators except the last one on the list, namely "I don't want to fall behind my colleagues who use computers in teaching." (Table 10). That is, females were more likely to consider the pressure from colleagues as an important motivator than males.

Barriers to the Use of Computers. Participants were asked about the importance of seven barriers to the use of computers including the lack of time to develop computer-based instruction, no time in the already intensive curriculum, unstable hardware or

TABLE 9
Perceived Impacts of Computers on Teaching and Learning

		Mean	SD	t	p
Faculty can spend more time with individual students	Male	2.85	1.07	-0.33	0.73
	Female	2.89	1.10		
Faculty can spend less time lecturing to the entire class	Male	2.84	1.11	0.14	0.88
	Female	2.82	1.16		
Faculty can spare time from teaching for research	Male	2.19	1.01	0.91	0.36
	Female	2.08	1.05		
Students communicate better with the instructor and classmates	Male	3.66	1.06	-0.99	0.32
	Female	3.78	0.93		
Students are better able to manage their learning activities	Male	3.66	1.05	0.57	0.56
	Female	3.59	0.94		
Students can learn the material more easily or thoroughly	Male	3.57	1.15	2.24	0.02*
	Female	3.28	1.04		
Faculty are better able to present more complex material to students	Male	3.57	1.17	2.08	0.03*
	Female	3.30	1.14		

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree. *p < .05.

TABLE 10
Motivations for the Use of Computers

		Mean	SD	t	p
Computers have the potential to enhance teaching and learning	Male	4.17	0.82	-0.35	0.72
	Female	4.20	0.66		
I enjoy figuring out how to use computers in teaching	Male	3.35	1.30	0.17	0.85
	Female	3.33	1.20		
Computers enable me to make a subject more interesting,	Male	3.79	1.06	0.11	0.90
	Female	3.77	0.99		
Students expect instructors to use computers in teaching	Male	3.66	1.06	-0.37	0.70
	Female	3.71	1.01		
Computers provide an environment appealing to different learning styles	Male	3.73	1.03	-1.47	0.14
	Female	3.90	0.96		
Computers enable students to collaborate in learning	Male	3.56	1.04	-1.53	0.12
	Female	3.74	0.94		
University policies encourage faculty to use computers in teaching	Male	3.04	0.97	-1.49	0.13
	Female	3.23	1.21		
I don't want to fall behind my colleagues who use computers in teaching	Male	2.75	1.14	-3.66	0.00*
	Female	3.20	1.03		

Note. 1 = Strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree. *p < .01.

software, mismatch between available computer software and courses, not enough training opportunities for faculty, limited research evidence showing the effectiveness of computer integration, and no recognition or reward for using computers in teaching. Gender differences were found statistically significant for three barriers: unstable hardware or software, not enough training opportunities, and limited research evidence (Table 11). Compared with males, females were more likely to consider these three barriers having significant influences on the use of computers.

Professional Development. The participants who had used computers in teaching were asked to evaluate the importance of seven sources where they acquired computer skills related to teaching. There was no significant gender difference for the source named "learning from experience." However, females reported significantly higher importance than males on other six sources including formal courses, colleague mentoring, student assistance, support staff assistance, workshops or presentations, and family members (Table 12).

The participants who had used computers in teaching were also asked to reflect the importance of six sources where they acquired pedagogical knowledge for using computers in teaching. Again, there was no significant gender difference on "learning from experience." Males and females considered literature similarly as well. However, for other four sources

TABLE 11
Barriers to the Use of Computers in Teaching

		Mean	SD	t	p
Lack of time to develop computer-based instruction	Male	3.66	1.35	-0.46	0.64
	Female	3.73	1.26		
No reward from administration for using computers in teaching	Male	3.09	1.48	-1.15	0.24
	Female	3.29	1.42		
No time in the curriculum for computer-mediated instruction	Male	2.60	1.26	-0.93	0.35
	Female	2.74	1.40		
Available computer tools don't fit the course I taught	Male	2.32	1.32	0.70	0.48
	Female	2.21	1.27		
Unstable hardware or software	Male	2.52	1.27	-3.29	0.00**
	Female	3.01	1.31		
Not many training opportunities for university teachers	Male	2.33	1.28	-2.59	0.01*
	Female	2.73	1.30		
Limited research literature convincing the use of computers	Male	2.44	1.34	-2.23	0.02*
	Female	2.84	1.32		

Note. 1 = Not at all important, 2 (unmarked), 3 = Somewhat important, 4 (unmarked), 5 = Very important. *p < .05. **p < .01.

TABLE 12
Sources Where Instructors Acquired Computer Skills for Teaching

		Mean	SD	t	p
Learning from experience	Male	4.57	0.72	1.07	0.28
	Female	4.47	0.86		
Formal courses	Male	2.66	1.24	-4.23	0.00**
	Female	3.28	1.17		
Colleague mentoring	Male	2.91	1.21	-7.25	0.00**
	Female	3.92	1.07		
Student assistance	Male	2.30	1.15	-4.17	0.00**
	Female	2.94	1.37		
Support staff assistance	Male	3.32	1.33	-3.92	0.00**
	Female	3.93	1.21		
Workshops or presentations	Male	2.91	1.25	-5.28	0.00**
	Female	3.68	1.15		
Family member assistance	Male	1.83	1.12	-4.80	0.00**
	Female	2.63	1.64		

Note. 1=Not at all important, 2 (unmarked), 3 = Somewhat important, 4 (unmarked), 5 = Very important. **p < .01.

TABLE 13
Sources Where Instructors Gained Pedagogical Knowledge for Using Computers

		Mean	SD	t	p
Learning from experience	Male	4.27	0.87	1.30	0.19
	Female	4.40	0.79		
Literature	Male	2.70	1.26	-1.17	0.24
	Female	2.88	1.24		
Workshops or presentations	Male	3.02	1.31	-4.34	0.00**
	Female	3.69	1.20		
Instructional designers	Male	2.79	1.45	-5.53	0.00**
	Female	3.77	1.39		
Colleague mentoring	Male	2.99	1.27	-5.48	0.00**
	Female	3.81	1.20		
Formal courses	Male	2.53	1.15	-4.07	0.00**
	Female	3.12	1.20		

Note. 1=Not at all important, 2 (unmarked), 3 = Somewhat important, 4 (unmarked), 5 = Very important. **p < .01.

TABLE 14
Instructors' Ranking of Sources for Gaining Knowledge and Skills to Use Computers

		Mean	SD	t	p
One-on-one assistance from expert	Male	2.72	1.58	3.66	0.00**
	Female	2.10	1.37		
Learning from experience	Male	2.36	1.49	-3.60	0.00**
	Female	2.99	1.54		
Courses or training programs	Male	4.21	1.60	3.28	0.00**
	Female	3.61	1.52		
Literature	Male	4.76	1.58	-2.62	0.00**
	Female	5.22	1.39		
Workshops or presentations	Male	3.38	1.54	1.86	0.06
	Female	3.07	1.31		
Colleague mentoring	Male	3.57	1.58	1.40	0.16
	Female	3.32	1.45		

Note. **p < .01

including workshops or presentations, instructional designers, colleague mentoring, and formal courses, females were more likely to consider them important than males (Table 13).

All participants were asked to rank six common methods of acquiring knowledge and skills to use technology with 1 represents the most preferable choice and 6 the least. Females were more likely to rate "one-on-one assistance from experts" higher, especially ranking it as the number one option (50% females vs. 33% males). Males were more likely to rank "learning from experience" as number one (42% males vs. 25% females). These differences were significant based on the t-test results (Table 14). The t-test results also show that females were more likely to rate "courses or training programs" higher than males, and males were more likely to rate "literature" higher than females although both males and females rated it very low, mostly 6th (50% males vs. 68% females). Males and females rate workshops and colleagues mentoring similarly.

Discussion

This study found that female instructors, compared with their male colleagues, more frequently used student-centered teaching strategies such as questioning students' ideas before introducing new concepts, encouraging students to share ideas with neighbors in classroom, engaging students in small group discussion, and asking students to give presentations. They were more likely to consider "facilitate student intellectual development" as a more important high order teaching goal compared with teaching subject content and "students' active involvement in the course" as an important indicator for teaching success. Although their understanding of teaching, measured by their number one rank of statement about the nature of teaching, was not different (Table 3), females' overall concepts of teaching examined through multiple aspects including the use of student-centered teaching approaches, understanding of teaching, goals of teaching and criteria for the measurement of teaching success, to a larger extent than males, demonstrated a nature of student-centered concept. These findings draw us a picture that female instructors might possess stronger preference for student-centered pedagogy than males. This conclusion is consistent with the findings from previous studies on faculty pedagogy (Campbell & Varnhagen, 2002; Park, 1996; Robin & Harris, 1998).

Regarding the use of computers in teaching, this study found that females reported less computer expertise than males in one third of computer tools. They also reported less comfort and experience in the use of computers in teaching. Females' less expertise, comfort, and experience with computers were also reflected in their responses to the barrier questions. More females than males considered unstable hardware or software and lack of training opportunities as significant barriers to the use of computers. These findings are consistent with the study results of Spotts, Bowman, and Mertz (1997), who claimed that females were less confident with their skills and experience in the use of computers than males. However, our study found that a compatible percentage of males and females had used computers in teaching and that their motivations to use computers did not have many significant differences.

Spotts, Bowman, and Mertz (1997) reported that there was a significant gender difference in one of the barriers to the use of technology: lack of time. In their study, females rated lack of time as a greater barrier than did their male colleagues. Our study found that this difference was not significant at the studied university. However, we found that gender differences were significant for three barriers: unstable hardware or software, not enough training opportunities, and limited research evidence. In regard to the motivations, females were more likely to consider "I don't want to fall behind my colleagues who use computers in teaching" as a significant motivator. In other words, females were more likely than males to take pressure from colleagues as a significant motivator for their use of technology. Regarding the measurement of teaching success, students' attendance in class and their ratings of instruction were considered as significant criteria by more females than males. These findings lead us to think that females might be more subjective to external influence on their teaching in general and use of technology in particular.

Studies in sociology report that women are more expressive and tend to focus on social-oriented activities, whereas men focus more on task-orientated activities (Wood & Rhodes, 1992). Our study provides some evidence for these claims in the context of technology adoption. In this study, we found that females preferred to learn how to use technology from others, whereas males were more likely to learn from their own experience. Given the gender difference in socialization, it makes sense that that females were found to be more subjective to the external influences from their colleagues on their attempt to use technology.

Based on a couple of faculty surveys conducted earlier at the same university as this study, Campbell and Varnhagen (2002) claim that male and female faculty may approach technology through different routes. Males tend to pick up technology first and then consider its application in teaching, whereas females tend to start with their instructional needs. In other words, females put greater emphasis on pedagogy than technology, while males tend to be attracted by the

technology first. From this stance, they suggest different models of professional development for males and females. They argue that females may prefer pedagogically based training where relevant tools are presented. Males may prefer training featuring a technology where instructional methods are also addressed. Since this study found that females might be more subjective to external influences in the use of technology and more likely to learn knowledge and skills from others, in addition to the suggestions made by Campbell and Varnhagen, we recommend that professional development for females should involve more showcases and interactions while training for males would be more appropriate when it provides many hands-on activities.

Conclusion

In summary, this study demonstrates that male instructors might have greater expertise and feel more confident in the use of computers than females. Females are more likely to have a student-centered overall concept of teaching. They might be more subjective to the external influences from their colleagues on their attempt to use computers in teaching and prefer to learn how to use technology from others. Therefore, in regard to the question whether or not males and females approach technology differently, our current answer is positive. However, to produce a more comprehensive and clear understanding of gender differences in technology adoption, it is important to examine how males and females actually use technology in their classrooms.

Acknowledgements

The authors are grateful to the funding support from a Humanities, Fine Arts and Social Sciences Research grant. We also thank Professor Jacobsen at the University of Calgary who kindly permitted us to adapt some questions from a survey instrument she used before.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 154-166
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Learning to Become Researching Professionals: The Case of the Doctorate of Education

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This study investigates how learning to become a "researching professional" (Bourner, Bowden, & Laing, 2000) is understood by students undertaking a professional Doctorate of Education in one university in the United Kingdom (U.K.). This research is apposite given the present context for doctoral education both internationally and in the U.K. However, a literature review shows this is a relatively under-explored area. The study was designed within a phenomenological and descriptive/interpretive paradigm using case study methodology. Data was collected using semi-structured interviews with 12 students. The analysis was guided by research in other disciplines within higher education which has revealed qualitatively different conceptions of student learning. In this study, three ways of understanding learning to become a "researching professional" were identified: *conformity, capability,* and *becoming and being*. Each is characterized by an internal relationship between how the learning context, research, and professional identity are understood. Each of these ways of understanding is discussed in relation to the literature. The complexity of professional learning at the highest level for students who are "on the cusp" between the university, the work context, and the profession is highlighted. Although no generalizations are made from this study, it may be useful to others in similar contexts as it highlights implications for university tutors regarding student learning.

In line with an international shift in higher education over the last decade, universities in the U.K. have become part of the globalized knowledge market (Tennant, 2004; Usher, 2002). This has resulted in the fragmentation of knowledge and an increasing emphasis on context-specific and problem-oriented knowledge creation (Gibbons, Limoges, Notwotny, Schwartzman, Scott, & Trow, 1994). Outside universities, research has developed in both government and private enterprise, and, within universities, an increasing separation of research and teaching has emerged. Two separate central government funding streams for teaching and research have increased competition for research funding in the university sector, affecting the types of research undertaken and increasing pressure on individual academic researchers and institutions to improve doctoral research training. Also, there is an increase in expectations of universities for value for public money. The government has introduced audit mechanisms for teaching effectiveness and research quality, bringing increased accountability and the emergence of a new academic managerialism. Further, in a bid to secure labor skills required for an enhanced future national economy, higher education in the U.K. has been moved from an elite to a mass system from which students with transferable skills are required. In short, the expectations of fitness for purpose and cost effectiveness are challenging the autonomy and expertise traditionally enjoyed by universities, questioning and bringing diversity to their traditional functions as producers and teachers of expert knowledge. Such change brings pressure to universities to continually re-balance provision, to re-consider the relevance of pedagogy and curriculum, and to develop relationships with a range of partners.

Doctoral education is set in the middle of this changing context for the university sector, and is subject to these wider imposed imperatives. Doctoral education is the highest level of university education in the U.K., seen most obviously in the traditional Ph.D. In recent years, however, as universities have had to reconsider their position in the market place, several new routes in doctoral education have emerged. These include practice-based doctorates, new route Ph.D.s, and doctorates by publication. Such diversity in doctoral education is to be encouraged, according to the UK Council for Graduate Education (UKCGE), because it extends the capacity to change and generates opportunities to see research issues from different perspectives. It also indicates an investment in the capacities and learning of more people and is enriching in terms of student diversity. Further, it has served to open up the traditional "binary" system of higher education in the U.K. as "older research-led" universities have become engaged in this new market (UKCGE, 2002).

Within this context, and stemming originally from America and Canada (Allen, Smyth, & Wahlstrom, M., 2002) early in the twentieth century, the professional doctorate has emerged rapidly over the last decade both in Australia and in the U.K. Professional doctorates are research degrees for practitioners which combine higher learning with research in the workplace. Research is undertaken by practitioners in a professional context with knowledge production arising from specific issues identified in the workplace. Such research seeks to

make a difference to the profession, as well as having a direct influence on the working lives of the professionals.

While seemingly at odds with the tradition in universities that knowledge is pursued for its own sake, universities in the U.K. have successfully diversified into this new area of professional doctoral education. Bourner, Bowden, and Laing (2001) note an approximate 20% increase in such degrees over a wide range of disciplines - especially education, engineering and business studies - with the Doctorate of Education (Ed.D.) having the largest market (UKCGE, 2002). Several reasons for this rapid development into professional doctorates can be identified. There has been an increase in growth in professional fields and a consequent increasing emphasis on professional training and continuing professional development, with many professions requiring advanced study as a pre-service qualification. Professional work has become increasingly complex, with a need for professionals to have the ability to identify and solve problems at a high level. Government priorities for improving the professions have led to an increasing need for an analytical approach to professional knowledge, work, and roles. Thus, professional doctorates have been given an increased emphasis, demonstrated, for example, by the U.K. Economic and Social Research Council (ESRC, 2005) which has recently published updated *Postgraduate Training Guidelines* (presently under review). In these guidelines, professional doctorates have been given enhanced prominence, including a requirement for consistency of standard in provision and quality with the traditional Ph.D.

The Literature

A review of the international literature reflects the recent growth of professional doctorates in Australia and the U.K. In Australia, the focus seems to have been issues relating to the development of professional doctorates. Maxwell (2003) working from three case studies explored the development of "second generation" professional doctorates and the changes brought through this process. The changing environment for doctoral education has also been explored by Pearson (1999, who found that there were implications for management, improvement, and innovation. The key role of policy in encouraging diversity in doctoral education was explored by Neumann (2002) especially in relation to issues of cost, concentration, and relevance. The growing diversity in doctoral degrees has also been related to the knowledge economy and imperatives for universities (Usher, 2002) and also to knowledge workers (Tennant, 2004). McWilliam, Singh, and Taylor (2002) explored the issue of whether diversity in doctoral student population brought more risk in the management of doctoral programs. The similarities and differences between Ph.D. and professional doctorates in education, management, law and creative arts have been investigated by Malfroy (2005) in relation to doctoral supervision, workplace research and pedagogic practices.

A number of studies have emerged in the U.K. context, usually exploring the purpose of professional doctorates. Thorne and Francis (2001) examined both Ph.D. and professional doctorates using an ethnomethodological approach and found that diversity of students' career positions was not taken into account and that a homogeneous, rather than heterogeneous, approach to doctoral study was taken in government recommendations. An underlying confusion about the aims and mission of professional doctorates was found by Lunt (2002). Heath's (2006) research with professional doctorates in education built on this notion of confusion by suggesting that considerable variation in the construction of doctorates in education relates to different values placed on knowledge which effect matters such as supervision**.** Another study has addressed the notion of the development of capability. Doncaster and Lester (2002) explored this with reference to a generic work-based professional doctorate, and emphasized the central role of experiential learning in developing high level capability and motivation. The continuing professional and career development of doctoral students including those on professional courses was explored by Leonard, Coate and Becker (2004). This study questioned the then current national proposals to 'improve' doctoral 'training' in the UK by enhancing students' employability suggesting that policy should be based on the employment and other life needs of postgraduate students.

Several studies have explored professional doctorates in relation to the traditional Ph.D. Tennant (2004) argued that professional (working) knowledge is seen by universities as additional to their more traditional Ph.D; the effect of which can still be seen in the professional doctorate in a number of ways. For example, the professional doctorate still remains focused within a traditional disciplinary area and includes a traditional supervisor-student relationship.

Summative assessment by *viva voce* still dominates, even when formative portfolio assessments are included. The traditional Ph.D. concept of doctoral enterprise as the production of the "independent, autonomous scholars" as opposed to the "improved practitioner" still continues. Also, traditional funding mechanisms make it difficult to establish professional doctorates that focus on workplace problems. Tennant (2004) and Usher (2002) both argue that the dominance of the traditional Ph.D. route is not sustainable in a time

TABLE 1
Some Differences Between the Traditional Ph.D. and Professional Doctorates

Ph.D.	Professional Doctorate
Research training through apprenticeship model	Research training through taught program, with directed study, distance learning, summer schools, collaborative work
Dyads of student/supervisor	Teaching team /cohort of students
Supervision in university setting in relation to research thesis, and supervisor as expert in discipline or subject or area of research	Different mentors/supervisors for different elements of the program. Supervisors may be experts in professional area as opposed to particular discipline. Also the possibility of supervision in the professional context
Entry following first degree	Entry usually following Masters degree, and with required substantial professional experience and appropriate professional qualification
Narrow, specialist focus on Mode 1 knowledge (Gibbons, Limoges, Notwotny, Schwartzman, Scott, and Trow, 1994).	Broad focus on Mode 2 knowledge (Gibbons, Limoges, Notwotny, Schwartzman, Scott, and Trow, 1994).
Assessment by outcome product of thesis, examined by viva	Continuous assessment through course work, plus outcome product examined by viva
Requirement for transferable skills in training	Students already employed usually at a senior level in their profession.
Focus on research making a contribution to knowledge with wide dissemination	Focus on research affecting professional practice as well as making a contribution to knowledge, with focused dissemination
Ph.D. normally viewed as providing initial training for a career in academia.	The professional doctorate tends to be seen as higher study in terms of career change and development or the desire to consolidate their professional experiential learning -
Norm referenced. Research projects defined at outset and long term focus	Criteria referenced. Learning outcomes comprising professional skills and knowledge. Research projects are defined at a later stage in program (similar to Masters). Short term as well as long term strategic focus.

when the "new knowledge economy" is driving shifts in what constitutes an academic, what constitutes knowledge, and what constitutes knowledge contexts. They both argue the universities should instead be reviewing similarities between the Ph.D. and professional doctorates as a way of reviewing the essential question of what constitutes legitimate doctoral knowledge; both routes, for example, develop new knowledge that contributes to the development of the professions (Malfroy & Yates, 2003), and both assume a sense of creativity, innovation, and enterprise (Tennant, 2004).

Others, however, maintain that the two routes are essentially different. The essential difference could be that the professional doctorate is aimed at those wanting to become "researching professionals" (Bourner, Katz & Watson, 2000) with the Ph.D. aimed at those wanting to become "professional researchers." When the differences between the two routes are set out (see Table 1; Fink, 2006) this distinction can be seen clearly, identifying the professional doctorate as an alternative to the traditional and dominant Ph.D. route for advanced work and study within a professional setting. Thus, conceptually, at least, the Ph.D. and professional doctorate routes appear not to be in competition but appear to be distinctive and alternative to each other.

However, while the notion of the "researching professional" can be deemed to be intrinsically worthwhile, it also indicates a number of complexities which present challenges for universities. Firstly, there is a complexity to the learning process brought by the distinctive nature of professional doctorate programs. They are dedicated to having a direct influence on the working lives of the students, who are motivated from the beginning of their course to improving their professional practice. New types of knowledge and new types of relationships brought by professional doctorates were investigated by Scott, Brown, Lunt, and Thorne (2004) across the three professional areas of business, education and engineering. They found that they require a distinct and wide ranging body of knowledge and skills concerned with continuing professional development, emphasizing the inherent reflexivity needed for those on professional doctorates.

Secondly, there is the complexity to the learning process as students are "on the cusp" of different cultures of learning – the university, the profession and the workplace (Malfroy & Yates, 2003). Such a position gives professional doctorate students multiple

positions, without one research culture into which they are to be inducted. Instead they work betwixt and between the different expectations and cultures of those who face entirely different institutional contexts. While challenges generate learning, there is a danger that any conflicting demands will result in student learning being fragmented rather than being seamless and that students will experience a dissonance between theory and practice, thought and action. Rosaen and Schram (1998), for instance, talk about universities wanting "transformative intellectuals" who will be agents of change, while there is evidence that communities of practice (Lave & Wenger, 1991) succeed if they have the ability to continue to reproduce themselves by passing on their own skills and knowledge to the next generation.

Thirdly, there is a complexity to the learning process because of the students themselves. Studies have shown that professional doctorate students are shaped by experiences, and consequent values, that are different than the traditional Ph.D. scholar (Miller & Brimicombe, 2004). They tend to be studying part-time, while in full-time employment. They have responsibilities in the workplace and as a student, coupled with family and consequent financial commitments. Professional doctorate students tend to be mature and self-funded individuals (UKCGE, 2002), who consequently have high expectations. On one hand, they tend to hold relatively senior positions in their own profession, being high-achieving and bringing with them extended expertise, experience, and professional qualifications; thus, they can be more expert than their supervisors in some aspects of professional knowledge. On the other hand, they can be deemed to be novices in research and higher level study. Dissonance could occur when competing demands of both "hands" unfold. Thus, these variables may affect how students construct the learning context and how they form their professional identity as a researching professional; both of which are central to their learning outcomes and an important consideration for university tutors.

The literature, therefore, shows there is a very real complexity to learning to become a researching professional at doctoral level. This complexity raises a number of questions for the following:

- *student learning*; What is learned? Why is such learning deemed to be important and by whom? Do students learn to research only in relation to their own particular professional context? Will students be able to transfer their research learning to other professional contexts?
- *universities;* What is the position and role of universities within professional doctorates? Will research "training" rather than research "education" be emphasized? What is it that universities engage in when they are involved in professional doctoral education? Has there been a fundamental shift in the expectations of universities in which the differences brought by the professional doctorate are acknowledged and developed? Have universities fully recognized such diversity and responded appropriately?
- *the nature of the professional doctorate*; How is the professional research community understood? What is the nature and value of pedagogy? What is the relationship between those designated as "experts" in the professional context and those designated as "experts" in the university context?

In essence, then, the professional doctorate brings to the forefront complexities and issues about understanding student learning and, consequently, teaching. However, there is a gap in investigations into how learning and teaching in professional doctorates are understood and approached, especially from the student perspective.

Yet, research undertaken independently in different institutional contexts and countries in other disciplines within higher education has consistently revealed that qualitatively different conceptions of *learning* and *teaching* exist within a continuum (Prosser & Trigwell, 1999). Such research studies – stemming from phenomenographic studies in Australia – have identified a number of different ways in which students, usually undergraduates, experience learning (Prosser & Trigwell, 1999). These include increasing knowledge, memorizing and reproducing, applying, understanding, seeing something in a different way, and changing as a person. The last category is usually advocated as the ultimate aim of higher education. Researchers (e.g., Prosser & Trigwell, 1999) advocate that meaning is "constituted" through an internal relationship between the individual and the world, with learning not being imposed externally on them but being defined as experiencing the object of study in a different way. In such an approach for students, learning is related to a number of interacting factors. These factors include students' approaches to learning (Marton & Saljo, 1997), students' preconceptions (Gow & Kember, 1993), intended learning outcomes (Trigwell & Prosser, 1991), and perceptions of the situation (Ramsden, 1992). These factors will either be in the foreground or background of awareness for any individual within the learning context (Marton & Pang, 1999). For learning to occur, the learner must experience variation. Bowden and Marton (1998) suggest that new contexts can supply the variation.

The Problem

While studies into tertiary level learning have taken place across a range of subject disciplines, very few have been undertaken in the context of professional university programs, and none have been found that deal with this at the doctoral research level. This study was designed to contribute to this perceived gap in the literature by aiming to provide some conceptual understanding about how learning to become a researching professional is understood by students. It is guided by the theoretical framework of qualitative variation in understanding learning and teaching in higher education. Following this theoretical perspective, this exploratory, small-scale intrinsic study was designed to elicit and analyze the perceptions of the students and identify the consensus and variation among the group of participants in the underlying meaning of learning to become a researching professional at the doctoral level. Therefore, the study aimed to provide insight into this previously axiomatic situation and to provide results that would enable opportunities for the researcher and colleagues to reflect on present policy and practice for the program.

Methodology

Approach

Given the focus and purpose of the research, the study was designed to be phenomenological in nature and within a descriptive/interpretive paradigm. A case study methodology was considered appropriate. There are limitations to this approach as it is not possible to generalize to a larger population, but this was weighed against greater attention to the lived experience of participants within one particular context and the possibility of providing "fuzzy" generalizations (Bassey, 1999, 2001) that those in other contexts may find relevant. Further, the literature on research methodology (Bassey, 1999; Hammersley, Gomm, & Foster, 2000; Simons, 1996; Stake, 1995, 1998, 2000; Yin, 1994) has served gradually to give case study methodology a higher profile in educational research.

Research Context

The university in which the study was focused is a large older research-led university in the U.K., where at present the Ph.D. is the dominant doctoral route. The focus of this study – the Doctorate of Education – was governed by the procedures for the Ph.D. The program comprises a taught program of research methods taught in the university to a cohort of doctoral students, who are required to produce a doctoral level portfolio of evidence demonstrating that they can undertake research in a professional setting and critically analyze the issues relating to their research.

Students also critically explore the wider issues related to their research area by undertaking an extended piece of research using the micro setting of their own work context. An empirical research thesis into a specialist area of their professional work which they have problematized is also completed. Both of these are "taught" in the traditional pedagogical student/supervisor mode rather than with workplace partners and are examined at *viva voce* by academics, not practitioners, with appropriate qualifications and expertise in the topic area. The doctoral student cohort also meets together for informal support meetings and on-line support is provided.

Most students tend to be part-timers with a maximum completion time of eight years with four years as a minimum. While the program is in education, senior managers, usually with at least 4 years experience, from a wide range of related professions are welcomed onto the course, which includes students from youth work, physiotherapy education, nurse education, management, health, social work, police, higher education, and local government.

The Participants

The study involved 12 students who were willing to be involved and who represented the range of experience within the wider student population in terms of gender, professional employment, length of time of program, and age (see Table 2). The number of participants may be considered low, but Trigwell (1994) cautions that more than 20 interviews provides too much data to handle, and the number was thought to allow sufficient but not over-extensive data to be collected.

Data Collection Methods

Semi-structured interviews were conducted using three questions to standardize and focus the interviews. These questions concerned what being a student in the program meant to them; what students thought learning to research meant to them; and what they thought helped them to learn to become a researching professional. Further questions were asked to enable students to elaborate, and clarification was sought to gain deeper insight into the underlying meaning. All interviews were recorded with participants' permission. Interviews took approximately an hour but lasted longer if necessary with "bracketing" (Bowden, 1994) used during the interviews and analysis. Confidentiality was maintained throughout the study.

TABLE 2
Composition of the Selected Group of Participants

Gender	Male	4
	Female	8
Age Range	25-34	6
	35-44	4
	45-54	2
Ethnicity	White	9
	Black British	2
	Asian	1
Professional Employment	School teaching	6
	Higher education teaching	2
	Local educational authority work	1
	Health	2
	Youth work	1
Length of Time of Program	1 year	2
	2 years	2
	3 years	5
	4 years	2
	5 years	1

Analysis

The interviews were transcribed and were analyzed as a complete data set through an iterative process using an open-coding framework developed through the constant comparative method to identify emerging categories and sub-categories. Clustering and re-clustering led to the emergence of different ways in which learning to become a researching professional was experienced by the participant group as a whole. Each way of understanding was given a key descriptor to summarize and show the differences in perspective. This key descriptor was used to label the three ways of understanding, namely *conformity*, *capability*, and *becoming and being*. The key aspects of each are described below with exemplification using extracts from the interview data.

Conformity

Here, students were interested in knowing how to research, with a focus on receiving information about research studies and practical knowledge of research techniques and methods. There is a preference for this to be presented by expert university tutors in an organized and structured way through lectures, use of PowerPoint, and supported by directed reading and structured tasks. Students wanted coverage of existing research studies and their findings. They perceived they had gained in knowledge about research if the material presented was research undertaken by the university tutor who was teaching the session; if the material was related to their own area of research interest; or the research methodologies were akin to what they perceived they would be using (both usually stemming from their masters' research interest). Usually students held a positivist approach to research and found it difficult to accommodate alternative ontological and epistemological views. Students saw themselves as functioning discretely in the university and in their professional context. In the former they perceived of themselves as students and novices, while in their professional work setting they saw themselves as experts. Student A explained this idea:

> For me it's about obtaining an objectivity. The more I'm told about research the more removed I become from my professional stance. I suppose it's because when I go into a classroom I know those 30 children as individuals – they mean something to me. I know what to do about them. But I become removed from that when I do research. I'm not

> involved emotionally so it's easy to separate the two …when I'm here [at the university] I see myself as a different person but not so certain of what to do!

As novices in the university context, students felt vulnerable when they presented work to university staff. This sometimes led to conflict when they felt supervisors wanted them to be autonomous and when students wanted to receive clear instructions and expert knowledge. Work load was perceived as heavy, and students found it difficult to keep up with their research work and professional obligations. Although they managed the difficulty by keeping the two aspects separate. Reading of the literature and research data gathered for assignments would be used for this purpose without necessarily informing or impacting on professional practice. They felt they were "still the same person as they had been at the start of the course" (Student D), but they now knew more about research. The doctoral qualification in its own right was an important outcome of being in the program. This would enhance their esteem with work colleagues and lead to promotion/career development in the same or another professional setting.

Capability

In terms of *capability*, students talked about being motivated by the program and wanted to "try out" different research techniques. Students were interested in engaging in research in their professional setting and felt that they were developing competence in a variety of methods through application of expert knowledge. Students liked receiving "solid" information about research studies and methods, but they also identified with other methods of teaching. Both presentation of their research work and peer discussion were useful to them as vehicles in which they could articulate their research area to themselves and others while sharing these ideas with other professionals. Students welcomed newly acquired alternatives to their own epistemological and ontological views; although they often held these in balance, opting for one approach but appreciating other approaches. Student C stated, "I can listen to different views and engage in them. I understand them, but I need always to return to them." Connections were made between the university program and their work in the professional context, both conceptually and in reality. They saw themselves both as experts in knowledge and experience of their own professional context and as learners in research, but they understood that the weighting given to these identities would be balanced in favor of where they found themselves physically: the university or professional setting. Student E said:

> It was a challenge at first after 20 odd years in the workplace. Getting back into studying was hard, but the more I continued with it the more sense it made to me in school. So I struggled, but I could use it in school, finding out things to help me do better in the classroom.

And student C stated:

> The pure theoretical stuff for a lot of us who have been in the workplace for a considerable time and have a day job wasn't that useful…the applied stuff is far more relevant to me, and if I read subject journals that relate to the day job I see the point more. It's a thought process I need to develop. It's not a workplace qualification, but it's challenging to make the connections between theory and practice.

In spite of the senior positions students held in their workplace, they felt positioned as novice students in the relationship with their expert supervisors. For students in this category, this presented a dilemma of inequality and role conflict, as they saw themselves as experts in the professional field with comparable, if different, skills to the academics. However, tutorials with university teachers, perceived as experts in research, helped to develop students' research ideas and methods. Students acknowledged the transactional nature of the program, understanding that it was helping them as individuals to "do things better" in their professional setting, to reflect on their individual practice, and to try out alternatives. Students felt that they made their own connections between what they learned at the university about research and their individual professional work. Usually sharing their research ideas and work was kept to a minimum with professional colleagues in their own work setting. Although students felt that their identity in the workplace was changing in the eyes of professional colleagues, with some feeling more confident in the work setting and others feeling a sense of "moving beyond" their professional colleagues.

Becoming and Being

With *becoming and being*, students thought and acted critically about the principles and practice of research. They made connections with the program and the research they undertook in their workplace. They spoke of finding "the journey of learning to research" (Student K) not easy, often going backwards, often a struggle, but they were motivated to continue because it made them exhilarated and excited to work on a problem and find a way through it. It helped them to contextualize a specific professional problem within a political, managerial, and financial context which they

had not perceived previously. Student E described the contextualization as follows:

> Where I work recently they wanted to bring in some changes in the structure. They brought out these different ideas they wanted to hang these changes on and I was able to identify some of the theories and ask them what is it they wanted to achieve from [these changes], and what effect they would have on staff. So I was able to challenge them about it. I couldn't have done, wouldn't have, done that before [beginning the Doctorate of Education]… They are starting from one reality, and I have a different reality now.

They wanted to think critically about generic professional practices and also about generic research methods. However, students here felt that the research they undertook raised further questions and that there was "never an end." That is, doing research in their professional setting identified further areas to research. As student D said, "Suddenly everything becomes a problem."

As they became more expert in research and as researchers, they became enhanced learners in and about their profession. In this way they felt there was room for personal growth as well as professional growth and growth in the profession. They engaged actively in their own learning through setting and influencing the implementation of their own professional research agendas. Students spoke about generating knowledge to find solutions to problems in their professional context through critical engagement with research literature, working with university staff, and collaborating with professional colleagues, often senior managers. Students also felt a collaborative relationship with their university supervisor. In this way they were able to focus in a holistic way on their learning, making connections between the university and workplace. Thus, they felt able to collaborate in the development of their "community of practice" (Lave & Wenger, 1991) by combining a diverse range of views. Student J articulated this feeling:

> I can read an article now and say OK. Then, they're coming from this perspective and say, "That's interesting I never thought about it in that way before." I ask now why they think that, and I'll discuss it with [name of university tutor] and some colleagues at school.

Students in this category spoke about having increased confidence in their own thoughts and decisions, and of being able to understand the alternative viewpoints of others. They spoke of taking initiative in both professional and university settings and being able to work in different ways with different people, thus establishing for themselves a new identity. Students could envisage that they were changing as a person in both the university and professional settings, albeit with different matters fore-grounded when in either place.

Conclusions

Three different ways of understanding – *conformity*, *capability*, and *becoming and being* – were identified. Each is characterized by an internal relationship between how *research*, the *learning context*, and *professional identity* are understood. *Conformity* focuses on students knowing about research, with them viewing this within the traditional apprenticeship model of doctoral education; that is, a transmission approach with the passing on by university experts to novices of technical expertise, with an emphasis on personal and individual research competence, demonstrated through thesis and award. The aim appears to be to generate knowledge for its own sake and to develop individual students' practical and professional experience and achievement of personal theory of practice. With regard to the doctoral work, there is an irreducibility of learning in the professional workplace in favor of learning in the university. Learning is seen as an intellectual, personal pursuit with a separation of student identity and role as expert/learner. In this category, the professional doctorate appears as a specialist form of the Ph.D. program aimed at advancing new knowledge in the field and is seen as distinguished from the Ph.D. only in structural elements, for example, the research methods program taught to cohorts which students found supportive. Supervision is viewed in its traditional form. The site of learning about research is the university, which is perceived as where students receive expert theory and the professional setting is perceived as where they implement and demonstrate the application of this. A linear approach involving a one-way relationship between research and practice is evident. Students work as researchers on a practice situation rather than as part of the situation: they perceive themselves as researchers who are outside the research and its context, even when they are undertaking research in their own professional context, bringing a new dimension to the concept of outsider/insider research. This suggests a separation of the learning experience and that learning to become researching professionals is not conceptualized as a whole. While this may underline traditional divisions between (a) universities and the professions, (b) theory and practice, (c) thought and action, and (d) research

and practice, such dichotomies are not necessarily characteristics of researching professionals or of professional doctorates.

Capability focuses on students' individual activity, experience, skills and techniques; in other words, on "doing" research. Research is part of the self-management of students' own personal practice context and is undertaken for the specific purpose of understanding and improving students' own professional practice. Research is seen as an intervention, with a view to improving practice in one's own personal context. Thus, doctoral work assists in articulating previously tacit knowledge, although high level thinking and action is developed around the chosen area of research. There is a familiarity with local issues and an interest in pursuing research around a local problem in order to improve practice. Knowledge is created and used by practitioners in the contexts of their own personal professional practice. In this way knowledge is viewed as contextual. The site of learning is both the university and the workplace, but there is a balancing of student identity according to the physical location of student.

This is in contrast to *becoming and being* where learning to become a researching professional is viewed as a holistic experience in which there is a variety of learning contexts which provide the student with variation to develop conceptually and change themselves. Personal research capability is secondary to the ability it gives to creating development and change in a generic sense. This way of understanding is characterized by engagement in a process of critical enquiry, generating ideas, with knowledge shared and generated so that principle and practice, individuals and groups, and contexts can change. Doctoral work is seen as aiming to develop theory, in which the research process and practitioner is central but which is of value beyond students' own organization and community. Research and practice co-exist in a spiral relationship, so that practitioners can move beyond taken for granted assumptions. Research is seen as systematic questioning of specific and general problems. The university is seen as part of this spiral. This suggests a deep approach to learning in which students "constitute" meaning through an internal relationship between the individual and the world, and, thus, experience researching professional contexts in a different way. Students generally adopt an active and reflective role in their own learning. *Becoming and being* is based on a deeper reflection that brings about the development of personal identity for the student and change in professional practice in the wider sense as the practitioner leads high level development and change on an institutional basis. In this way dilemmas and contradictions of professional practice are held in tension moving beyond this to create solutions. This suggests student empowerment, potential, and emancipation.

Implications

No attempt is made to generalize from this study, which must be treated with some caution due to its exploratory and small-scale nature. However, given this, several implications emerge that may be relevant to universities working with professional doctorates in a changing context for higher education. One implication is that the findings of this study link with existing literature on student epistemology. Perry (1970) indicated that students in an undergraduate liberal arts program developed progressively more intricate epistemological beliefs as they progressed through their program. Perry described these as dualism, multiplism, relativism and commitment. In addition to Perry, Baxter Magolda (2001) suggested different ways of knowing, termed absolute, transitional, independent and contextual, and identified a gender difference within these different ways of knowing.

The possible continuum of different theoretical awareness of learning to become a researching professional identified in this study is also similar to previous research in higher education (Prosser & Trigwell, 1999) which has identified levels of understanding learning in a variety of discipline areas in higher education. It is possible that there may be a vertical relationship between the three different ways of understanding identified in this present study, progressing from a simplistic to a more complex understanding of learning to become a researching professional. This study suggests students range from being passive recipients of knowledge about research methods and research studies, engaging in the process of research, and becoming and being active agents in creating their own research agenda to develop their own professional and personal learning. Supervisors/tutors are viewed differently, ranging from the expert possessing research knowledge and skills and transmitting this to students, supervisors/tutors providing experiences which support students in undertaking their own research in the professional setting, and supervisors/teachers acting as facilitators of the process of student learning to become researching professionals. The impact varies from one in which the student benefits, to the particular micro work setting benefiting, to potentially impacting on the macro workplace and even the wider profession of the student. It is contended here that professional doctorates should seek, not to reduce learning to a set of knowledge and skills (*conformity*: level 1) or to a focus on practice (*capability*: level 2), but to promote learning which moves beyond these to "know, act and be" (Barnacle,

2004): a way of understanding learning that touches upon all aspects of a person's life – a critical way of being. This is identified in this study as *becoming and being* (level 3). Assuming, then, that this way of understanding (level) is the one to be aimed for, it is suggested that professional doctorates should bring about a way of moving students to this more complete level by enabling them to understand their own development as researching professionals. Thus, it may be incumbent for those responsible for professional research training to help students enhance this approach.

Several suggestions about how this can be achieved are identified briefly here. First, the teaching and the teaching context will need to be organized to enable students to become aware of the demands of the program and to take a deep, as opposed to a surface, approach to learning to become a researching professional. This has implications for the structure and content of the program, the teaching methods, the research supervision arrangements, and the *viva voce* examination.

The second suggestion is that teaching and the teaching context will need to be based on a rationale that focuses on students' learning about themselves (Prosser & Trigwell, 1999): beliefs about themselves as learners and how they may relate to and act on factors which may affect their progress. Helping students to see learning to become a researching professional in a different way may help them to make more informed and considered decisions about the learning context, research, and their own professional identity. Helping students problematize and search for personal meaning by adopting a critical approach may help them to see matters in a different way and to develop coping strategies to overcome any perceived barriers and problems while on the course.

This also raises the issue of differences between students' understanding and that of universities, their tutors, and how these are presented in course aims and teaching. Thus, thirdly, this places a special responsibility on those in universities who are engaged in professional doctorates to look again at the way we work. Consequently, how we understand and approach teaching on professional doctoral programs is an important consideration. Some work is developing in this area. For example, the *Carnegie Project on the Education Doctorate* (Golde & Walker, 2006) is looking at the purpose of doctoral education in the preparation of students to become "stewards of the discipline."

While this study did not look at university tutors, recent studies (Prosser & Trigwell, 1999) in other university discipline areas have indicated an empirical relationship between university tutors' views of teaching and students' approaches to learning. It is suggested that university tutors will need to consider and confront their own perceptions of what learning to become a researching professional means to them and what they understand by the learning context, by research, and by professional identity. Indeed, for them to take a deep approach to these matters which may, as a consequence, lead to changing themselves as they strive proactively to manage student learning.

Fourth, such an approach challenges us to think about the purpose of professional doctorates. What this study suggests is that professional doctorates are valued by students for their transformative, as well as transactional, capacity to change individuals as well as to do things better so that thinking and doing are treated as inseparable, each informing and improving the other. This implies professional doctorates are values-based, and are about students acquiring a set of attitudes, such as altruism, to the professional community in which they work and the wider profession beyond. Thus, there may be an ethical purpose to professional doctorates based on personal development and change in *becoming* and *being* a researching professional.

Lastly, then, this has consequences for the relationship between universities and professionals. Both have complementary, if different, knowledge, expertise, and authority; this study highlights the tension between practitioner relevance and academic rigor in a professional research degree. This has implications for how students and universities tutors work together and how they can collaboratively contribute to knowledge development. In this way, universities form part of the catalyst in the development of the knowledge base for professional practice with knowledge and practice interacting through research. Thus, in this way this study challenges the traditional dichotomy between research and practice; theory and action; and suggests the need to review university expectations for professional doctorates with respect to the development of the relationship between the university and the professional context. In short, this highlights a number of questions, beyond the scope of this paper, concerning the role of the university in fostering this way of working. What is the learning and teaching community involved in professional doctoral programs? What is the relationship between those deemed to be experts and learners in the university and professional contexts? Should professional doctoral programs be developed in partnership? Should supervisors visit students' professional contexts to engage in joint research? Should there be professional supervisors? What is the relationship between universities and professional bodies?

Further Work

Further work is necessary to see whether the three ways of understanding learning to become a researching professional identified in this study will stand up if more extensive work – with a larger group of participants and/or in other contexts – is undertaken. Further work could also be conducted into whether these "levels" are connected to students' stage in their career life-cycle and/or stage on the professional doctorate, and whether individuals achieve a stable point on the continuum or move between these points depending on context. With these adjustments the findings may emerge differently.

Summary

This study was premised on the notion that, in contrast to other disciplines in higher education, there has been little research into the notion of how learning to become a researching professional at doctoral level is understood by students. The findings of this study highlight that learning to become a researching professional at the doctoral level is understood in three different ways, underlining that the process of professional doctorate learning is a complex intellectual and critical educational undertaking with unresolved tensions. The findings suggest that central to student experience of learning to become a researching professional is the student and how students situate themselves within the complex learning context in which they find themselves: how they make sense of being betwixt and between the university and the workplace and how they make sense of their own professional development and change process. The results of this study serve to highlight some pertinent issues about how universities really engage with the complexities of teaching and learning and the complexities of the location, context, and situatedness of the learner. Thus, there is a need for university tutors to critically consider the pedagogical aspects of learning and teaching within professional doctoral education. This study has made a small start to acknowledging the complexity of professional learning at the highest level and implicitly presents some challenges to the notion of learning, teaching, and the creation of new knowledge. This study may be useful to others in similar contexts, and, through this, may contribute to wider academic and professional debate.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 167-177
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Harry Potter, Benjamin Bloom, and the Sociological Imagination

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This paper is an examination of utilizing the J.K. Rowling *Harry Potter* series as a teaching tool for introductory sociology courses. Because of the ease in comparing the Wizard culture in which Harry lives with their own culture, students apply critical thinking skills and thus increase their ability to think beyond their own, immediate social systems carrying them to stages three and four, application and analysis, in Bloom's Taxonomy. Particular strengths of the *Harry Potter* series are illustrations of sociological theories and social processes; examples of social stratification; and explanations of basic sociological concepts such as norms, sanctions, and deviance For this class, students are required to read the first two books or watch the movies adapted from these books. In addition, they must read the third and fourth books in the series as the movie adaptations omit significant sociological parallels. These books and movies increase abstract understanding of sociological concepts as they apply to the fictional world of wizards. These abstractions become concrete as students apply this understanding to the analysis of their own place in their social environments.

C. Wright Mills (1916-1962) wrote, "The sociological imagination enables us to grasp history and biography and the relations between the two within society. That is its task and its promise" (Mills, 1959, p. 6). He further described social scientists as those who ask imaginative questions, seeking answers beyond the obvious, searching for the obscure, and the unexpected answer. In looking at the structure of any society he recommends three questions specifically aimed at jumpstarting this sociological imagination. These are:

1. What is the structure of this particular society as a whole? Its components and the relationship between components? What is the meaning of continuance or change?
2. Where does this society stand in human history? What does it contribute to the meaning of humanity? What are its essential feature and how do they differ from those of its past?
3. What varieties of men and women now prevail in this society and in this period? (Mills, 1959, p. 6-7).

Beyond the scope of the classical definition of the sociological imagination, Mills "conveys a sense of what it means to be an intellectual who concentrates on the social nature of man and who seeks that which is significant" (Elwell, 2002, slide 80).

It is this task, to "seek that which is significant" as it defines man's relationships to others and social structures, that creates relevance in the classroom. Schaefer (2002) introduces the sociological imagination as "an unusual type of creative thinking….that allows us to comprehend the links between our immediate, personal social settings and the remote, impersonal social world that surrounds us and helps to shape us" (p. 3). One key to using a sociological imagination is the ability of viewing our own society as an outsider would. Divorcing self from the near (very well known and opinionated) environment is a difficult task for entry level undergraduate students.

In 1956, Benjamin Bloom published his taxonomy of learning behaviors. He addressed the order in which students attain, incorporate, and use knowledge. Bloom outlines three domains in which education takes place. These are cognitive, affective, and psychomotor. The first or cognitive domain involves the development of the intellect or the way in which we gain and integrate knowledge and therefore, provides educators with a guide for educational planning and assessment. The cognitive domain outlines six definitive stages or skill sets addressed in the educational process, each building on the one preceding it. Thus a student must first gain *knowledge* (be able to recall information) then progresses to *comprehension* (be able to interpret information). (S)he is then prepared for *application* (being able to apply information in a different context) and then moves to *analysis* (being able to distinguish between facts and inferences). The two most sophisticated cognitive skills are *synthesis* (being able to create a new meaning for the information) and *evaluation* (being able to make judgments about information and the way the information is used).

Typically, introductory courses are offered to entry level students, either those who are coming to college directly from secondary schools (traditional students) or those coming at a later point in life (nontraditional students). Typically, these students are at the

knowledge or comprehensive level of competence on Bloom's Taxonomy of cognitive learning (1956). They can *know* the social structure of Harry's world and *comprehend* the underlying dynamics thereof, but the educator's goal is to provide a means for accessing more sophisticated learning through *application* and *analysis.* Through sociological pedagogy and a fictional parallel world, students must become competent in applying their understanding and then analyzing this understanding in different contexts. The final course project, interpreting *Harry Potter* through a theoretical lens, provides them with an opportunity to *synthesize* and *evaluate.* Not all introductory students are able to do this well early in their educational careers. Higher education is in the business of taking students from merely knowing to critical evaluation of that which they know.

Brookfield (1987) defines critical thinking as having four components, (a) identifying and challenging existing assumptions, (b) challenging the importance of context, (c) attempting to imagine and explore alternatives, and (d) exhibiting the resultant reflective skepticism, (p. 7-9). Integrating these concepts with Bloom's Taxonomy allows a fleshed out continuum for teaching and learning. The critical thinking components exist on a progressive continuum such that a student must first know the existing assumptions (Bloom's level one and two, knowledge and comprehension) well enough to challenge these assumptions. (Bloom's level three, application). They then move toward understanding the importance of context in learning (Bloom's level four, analysis). These tasks are accomplished by combining fact and fiction as proposed in this course. Context is primary in understanding and integrating sociological thought into meaningful learning. Through a challenging final project, I provide students with the opportunity to imagine and explore alternatives (Bloom's level five, synthesis) and then to skeptically reflect on their original assumptions (Bloom's level six, evaluation). My job as an educator is to provide the experience and means by which my students can develop higher cognitive levels of learning. In this sense, Vygotsky would define me as a facilitator of learning.

Brookfield's concept of critical thinking emerging on the Bloom continuum raise questions about the how and when such learning takes place. Vygotsky's (1978) ideas regarding circular zones of proximal development tell us that learning takes place when the student is in such a zone and creates fertile opportunities for the teaching professional to model and lead students to critically think along the continuum. Vygotsky reminds us that development is the internal process and learning is the external evidence of that process and that learning is most facilitated by example and social interaction. Harry and the instructor are partners in this quest. In Vygotsky's terms, Harry Potter is the means whereby students observe development of another person and culture as the stories evolve and Harry and his friends move from childhood to adolescence. They become aware of the learning that takes place as Harry matures and evidences his unique position as a critical thinker. On another level, they learn about themselves as they develop insight into Harry's world, personality, and the interaction between the two. The very activity required for working though the Potter series assumes truth in Vygotsky's reflection, "What a child can do with assistance today she will be able to do by herself tomorrow (p. 87). *Application* and *analysis* lead to higher order thinking and clear a path toward *evaluation.* Understanding the basic plot of the Potter series underlies success in this process.

Harry Potter is orphaned as a baby when his wizard parents are killed defending him against the forces of the evil Lord Voldemort. Harry is taken to the home of his maternal aunt, Petunia Dursley, an intolerant, rather befuddled, nonwizard, and is raised in her very traditional British family without any awareness of his special status of the lone survivor of Voldemort's sophisticated magic. Indeed, he has no knowledge that he possesses any supernatural talent and is unaware of the parallel existence of a wizard world. Treated as a servant in the Dursley household, he longs for family and emotional connection when, close to his eleventh birthday, he is magically summoned to Hogwarts School of Witchcraft and Wizardry. After significant family struggles, Harry arrives at Hogwarts and is introduced to the world of wizards and his destiny to help preserve his world against the reincarnation of Lord Voldemort. He forms close friendships with Ronald Weasley and Hermione Granger, classmates who support and defend him in his various trials and adventures.

The wizard world of Harry Potter and Company allows students the freedom of exercising their imaginations, applying sociological thought and theory to a parallel society, without obvious defenses or emotional roadblocks. In writing about the Potter series, Whited (2002) says that,

> Surely any books that will be deemed 'classics' must reflect something about the values of the age and society that produce them. They must conjure a real world or one that parallels the real world in intriguing ways. They must use language in a way that calls readers' attention to language itself and to how language reflects culture and cultural values. (p. 9)

In this sense, and in concert with Mill's references to "what varieties of men and women prevail in society," J. K. Rowling, the author of the *Harry Potter* series,

provides us with a sociological classic. After an examination of the wizard world, Harry leads students to a more critical analysis of their own social environments, an examination through which the explanatory lenses of theory may be applied. Harry's world aptly lends itself to the introductory study of sociology.

Most introductory sociology courses at the undergraduate level include five units of general study: the history of sociology and sociological research; sociological concepts including culture, society, and socialization; stratification and social inequality; social institutions; and social theory. The last four of these are particularly amenable to parallel analysis from the wizard world as described by Rowling in her *Harry Potter* series. Although Ms. Rowling has published seven volumes in the series, only the first four are used to supplement the introductory text used in my course. The American editions of these works (*Harry Potter and the Sorcerer's Stone*, *Harry Potter and the Chamber of Secrets, Harry Potter and the Prisoner of Azkaban* and *Harry Potter and the Goblet of Fire)* are readily available and, in most cases, very familiar to my students. Students may choose to read the first two books or view movies of the same name because the movies are complete adaptations of the books. However, they are required to read the last two books as the movie adaptations of these volumes omit information that is applicable to our study. These sources provide students with sufficient information regarding Harry, his friends, his circumstances, and his environment to draw meaningful sociological conclusions and embrace the sociological imagination. This paper looks at each of these four areas as they pertain to teaching sociology.

Sociological Concepts

True to Bloom's taxonomy, the first unit of study requires the acquisition of basic knowledge and comprehension of social concepts. In order to understand human's relationship to others and to social institutions, it is critical to understand the structure of society. We define ourselves in terms of cultures and societies and use these definitions as determinants of social interaction, groups and organizations, and deviant behavior.

In his introductory text, Schaeffer (2002) defines culture as "the totality of learned, socially transmitted customs, knowledge, material objects, and behavior. It includes the ideas, values, customs, and artifacts of groups of people" (p. 51). In 1945, anthropologist George Murdock initiated a list of cultural universals, those elements common to every culture but expressed differently from culture to culture. Examples of cultural universals are the celebration of marriage, the use of recreation and sport, and sexual restrictions. This is a natural departure into the wizard world. What is the place of sport at Hogwarts? How is food used to celebrate special occasions? How are students housed by virtue of their age and sex? As students study cultural diffusion (the process by which a cultural items spreads from group to group) and cultural innovation (the process of introducing something new into a culture) they distinguish cultural icons from the wizard world or from the Muggle (meaning non wizard) world that may be defined as diffusion or innovation. They begin *applying* information in dual contexts.

Elements of culture are reflected in language, norms, sanctions, and values. Identifying wizard language is an easy task for students as elements of Rowling's imaginations have seeped into our vocabulary. McCaffrey (2003) reports that the word "muggle" has been included in the online edition of the Oxford English Dictionary (an obvious example of diffusion) and Consumers' Research Magazine (2003) reports that the U. S. Department of Health and Human Services is using the example of Hagrid's secret about Fluffy, the three headed dog guarding the Sorcerer's Stone, being exposed while under the influence of alcohol as a warning of the over use of alcohol for young consumers. Other sources have thus, *applied* and *analyzed* sociological concepts in creating generalized social meaning.

A discussion of norms and sanctions used as Hogwarts leads to an interesting conclusion. What is the moral use of sanctions when norms are broken? Harry makes it fairly common to break the formal norms or rules at Hogwarts and rarely suffers the expected sanctions for this deviance. Thus, Harry becomes a model of Bloom's highest level of cognitive learning, *evaluation*. Harry must evaluate and make decisions, and as the archetypal hero, is responsible for the life and death of himself and others. Perhaps, this is one of the most valuable lessons available from Mr. Potter, his ability to risk after careful evaluation. Julian (2003), in reviewing Kern's book on the moral choices of Harry Potter, reminds us that by the fifth book in the series, *Harry Potter and the Order of the Phoenix*, Harry is a boy "who usually fails to subordinate his emotions to reason" (p. 28). Kern postulates that Harry represents an "updated Stoic moral system whose primary virtue is old-fashioned constancy—resolution in the face of adversity" (p. 28). This is a wonderful jumping off place for classroom discussion on the use of norms and sanctions in shaping cultural values.

Katz (2003) addresses the use of Harry Potter's experiences as a victim of intergenerational trauma as a way of understanding such trauma in the context of today's children. Trauma is defined both culturally and socially and traumatic experiences, while universal in nature, are distinct to culture. What is traumatic in one

culture may not translate into trauma in another. What was traumatic for one generation, however, does translate into trauma for its antecedents. The example of Sirius Black's torture as a prisoner at Azkaban in constant contact with dementors, rings in Harry's own emotional emptiness as a child who has no roots because of the death of his parents. The tragedy of mistaken justice and resultant torture for his godfather emphasize this emptiness. Physical death is comparable to emotional death in Azkaban, allowing Harry a connection with Black that few others can understand. It is not only a personal connection, but also a culturally defined one and one that speaks to the differing emotional and cultural contexts in which we live.

Consideration of culture includes discussion of subcultures, countercultures, and culture shock, parallels of which are easily identified in the wizard world. Within the wizard world there are those who continue subverting the status quo and form a counterculture of followers of "He-Who-Must-Not-Be-Named," the villain, Voldemort. Students easily identify the houses of Hogwarts as subcultures and then continue to discuss the various cliques of the school and culture as they affect the lives of the characters. The Order of the Phoenix, or those who protect others from the Dark Lord Voldemort, is a subculture and the particular subculture of which James Potter, Sirius Black, Remus Lupin, and Peter Pettigrew were a part has grave impact on Harry's future, most obviously displayed in the disdain shown him by Severus Snape, himself a member of their student out-group. Harry's culture shock is painful every time he has to leave his adopted culture and return to the Muggle world of Vernon, Petunia, and Dudley Dursley. Further, the contrast of ethnocentrism as epitomized by the Malfoys and xenocentrism as epitomized by Mr. Weasley allows students easy identification of these concepts. Harry's magical gifts are evidence of the effects of heredity over environment although his inability to tap into these gifts without appropriate instruction is evidence of the effects of environment over heredity.

Harry's socialization into the wizard world is an obvious one. He reflects Erving Goffman's ideas about the presentation of self largely by managing his wizard self through impression management and the dramaturgical approach. Goffman, as an interactionist sociologist interested in how small groups and individuals interact, would find Harry a perfect case study as he watches what others do and them performs. We see him resocialized not only as a wizard but also as the Boy-Who-Survived, both of which are new roles for him. Sociologists define the main agents of socialization as family, school, peers, media, workplace, and the state. We see all of these at work in the life of Harry Potter as he progresses through early adolescence. An interesting assignment for students is to determine which of these (or combinations thereof) are the most powerful in Harry's life. Frank and McBee (2003) use Harry Potter to discuss identity development with gifted adolescents. In this context, as typified in our own culture, identity development reflects socialization at its peak.

No study of social processes is complete without a discussion of social groups and deviance. As a product of the British Boarding School genre, Harry Potter falls in line with other school boy heroes who succeed because they flout the rules with an almost cavalier attitude. Smith (2003) tells us that in this genre,

The hero or heroine possesses this rule-breaking spirit, and the best

> friend is usually complicit. Pranks, midnight parties, and unauthorized excursions off campus are all part of the protagonists' adventures. Occasional rule-breaking is in fact a test of the character's gumption and originality that the hero will presumably need in order to be a success in life. (p. 79)

Harry, however, wrestles with what he must accept as the necessity of breaking rules for the greater good. Harry struggles with the threat of expulsion from his new home, Hogwarts, while breaking rules to perpetuate the way of life he accepts as necessary for his progression. In classroom discussion, the outcome of his norm breading frequently is laced with an awareness of positive deviance, doing something against the norm for moral or ethical reasons. For some of my students, this is their first departure into ethical and critical thinking, based on concepts more sophisticated than Kohlberg's conventional morality summarized in his work regarding the development of moral reasoning. In fact, Dumbledore, the Headmaster, sanctions these infractions with "messages about character and morality" (Smith, 2003, p. 79) superseding rules meant for ordinary wizards and reminiscent of Kohlberg's Postconventional Morality (Whited and Grimes, 2002). At the end of *Sorcerer's Stone*, headmaster Dumbledore sets a precedent of awarding house points for Harry, Ron, and Hermione, who clearly break the rules and then are rewarded publicly for doing so. Observations of successful deviance reflect Harry's need for careful *synthesis of information* and the resultant *evaluation* for behavioral decisions. Students exposed to these ideas may model them.

Stratification and Social Inequality

The modern interpretation of stratification differs from Karl Marx's original ideas of classifications of individuals within society based on economy and

opportunity and has evolved into a multidimensional concept. It is best understood as a cultural universal by which members of society striate themselves by virtue of different criteria. In the western world, we think in terms of "isms," racism, ageism, sexism, classism, to understand the socially constructed divisions between people who form societies. Certainly facing these issues in an open classroom is a new experience for some of my students. Opening discussions regarding such concepts forces them to rethink and thus evaluate what they think they know and come to a new enlightened understanding. In this way, much of this unit focuses on Bloom's level one and two, *knowledge* and *comprehension*. Harry allows students to know things in an objective context with the opportunity to comprehend them at their internal level. Increased awareness in this case, is critical to the sociological imagination as we wrestle with contemporary issues.

Westman (2002) tells us that, "The wizarding world struggles to negotiate a very contemporary problem in Britain: the legacy of a racial and class caste system that, though not entirely stable, is still looked upon by a minority of powerful individuals as the means to continued power and control" (p. 306). This is true not only for British society but for Americans as well. It is this very legacy that underlies the social stratification of Harry Potter's world. Westman tells us that Cornelius Fudge has "inherited harbors of social inequalities and injustices that masquerade behind the draperies of democracy" (p. 307). These inequalities then, are both fictional and very real.

Other authors have addressed these issues in the Potter series, Smith (2003) discusses classism; Ostry (2003) discusses racism; Carey (2003) discusses slavery; Anatol (2003) discusses ethnicity; Park (2003) discusses socioeconomic status; and Gallardo-C and Smith (2003) and Dresang (2002) discuss gender. One of the salient themes of these works is the acknowledgement of Rowling's middle class biases and the reflection of her own upbringing on social constructs. Most authors agree that she exhibits an attempt of liberal acceptance between *mudbloods*, or those who are born of nonwizard parents, and *purebloods* as she portrays the pureblood Malfoys as classical representatives of upper class conservatism with all the negative intentions of a member of the middle class. She creates a school where race and gender seem to be unimportant but by their very unimportance, she obfuscates their very meaning to both culture and identity. Some stereotypical characterization is obvious such as the Weasley red hair and over abundance of children, their poverty and genial natures. This obvious reference to the place of the Irish in British tradition is classic and is furthered by Draco Malfoy's patrician blonde, pale, rather fragile stature. Malfoy says to Harry, "You'll soon find out some wizarding families are much better than others, Potter. You don't want to go making friends with the wrong sort. I can help you there" (Rowling, 1997, p. 108). True to middle class values, Harry gives his earnings from winning the Triwizard Tournament to the Weasley twins, George and Fred, "again demonstrating a preference for socioeconomic equity and minimizing the distance between himself and the Weasley family" (Park, p. 181).

Park (2003) tells us that Hagrid, the Hogwarts groundskeeper and Harry's first contact with the wizard world, is an example of the lower classes in Britich society; prone to drink, academic failure, and grammatical errors. He has a good heart but cannot be trusted to keep secrets vital to the security of Hogwarts students and is tolerated as a child by the wiser and kindly Hermione and Harry. Frequently, we see Ron in much the same light as Hagrid, again referencing his social status. Ron is brave but foolhardy. The social division between Hagrid/Ron and Hermione/Harry is reflected in the ethnocentrism voiced by the former.

> Hagrid claims that the less one has do with foreigners, the happier one will be—'yeh can' trust any of em'—and Ron refuses to try bouillabaisse at the Tournament welcome dinner. In contrast, Harry responds to Hagrid that Viktor Krum is 'all right!', and Hermione not only enjoys the French dish but develops a romantic relationship with Krum as well. (Anatol, 2003, p. 169)

We see the lower class distrust of the unfamiliar juxtaposed with middle class tolerance and global outlook.

Perhaps the most obvious representation of social inequality is the references to slavery and the house-elves. Park (2003) reminds us that,

> House-elves bow and scrape and flagellate themselves for even thinking badly of their owners. Rowling means to draw a parallel to slavery, but once again, because she frequently uses the elves for comic effect, she spoils her effort at social commentary. There is nothing funny about slavery, and the author's depiction of an enslaved class as something to entertain her readers is reprehensible. (p. 185)

It is interesting to note that the house-elves themselves, outside of Dobby, do not wish any change in their status but prefer to remain in eternal servitude. This is alien to every portrait of slavery in every era of time. From the Biblical portrayal of Hebrew slaves to slavery genre American literature such as *Uncle Tom's Cabin*, passive acceptance of the social appropriateness of

slavery has escaped the reader's imagination. Accepting this as fact is a stretch for American students, especially on a racially diverse campus and is the topic of hot discussion. Hermione's ridicule at being the champion of the house-elves in light of Ron's disdain for her and Harry's very indifference, are reminiscent of classic women's roles as "bleeding hearts" and social reformers in the traditions of Jane Addams, Harriet Beecher Stowe, and Mother Teresa.

Gallardo-C. and Smith (2003) suggest that gender, while less obvious in the series, and is never-the-less apparent as a definer of character. They remind us that, "Rowling's narrative reinforces traditional categories of labor, as it presents women primarily as wives and mothers" (p. 192) and illustrate their point with Petunia Dursley, Molly Weasley, and quintessentially, Harry's mother, Lily Potter, who sacrifices her own life for the life of her son. The one woman reported as working for the Ministry of Magic, Bertha Jorkins, is of such low stature that her disappearance is disregarded by the establishment in *Goblet of Fire*. Other working women teach or are reporters (and a fairly disreputable reporter at that) and while it is true that Minerva McGonagall teaches Transformation, the Defense Against the Dark Arts professors (the most prestigious academic appointment at Hogwarts) are men in these first four volumes. Even clear headed, intelligent, competitive, hard-working Hermione becomes tearful and sniveling in the face of danger and is there, at the end, to remind Harry of his brilliance and courage. The best example of this disintegration is when Hermione is confronted by the troll in *The Sorcerer's Stone* and Ron and Harry rush to her rescue. Dresang (2002) postulates that Hermione is the namesake of along tradition of women from literary works as diverse as mythology, Shakespeare, the Bible, and D. H. Lawrence.

> Both the mythical and the Shakespearean Hermiones were at the mercy of the men who controlled their lives, yet they were strong women who used their wits and their position to seek their due in life. Their twentieth century heirs are much more in control of their own destinies yet still not entirely free of male dependence. (p. 216)

Why is it that Hermione, who knows all the answers in class, indeed, teaches them to Ron and Harry, loses her ability to think? It is easy to recognize that it is a "female thing," evident because even Professor McGonagall struggles to maintain her emotions. She is given to occasional emotional outbursts, tolerated by a stellar, constant Albus Dumbledore. For students who care to look beyond the surface story, stratification is alive and well in the wizard world and coming to accept this is rich ground for introductory students.

Social Institutions

Social institutions are those entities within society that shape our lives and give our existence meaning. Introductory courses review the family, religion, education, government, and medicine as institutions worthy of study in the social context. Most sociologists agree that the family is the most influential agent of socialization and therefore, the first and most deeply imbedded source of social information and attitudes for the individual. Because most students have fairly clear ideas about and experiences with family, Harry's story challenges their existing family paradigm and thus tickles their sociological imagination

As sociologists, we talk about family in distinct terms. We speak of nuclear families (the family of origin), extended families, patrilineal and matrilineal families, and pseudofamilies. Students find it easy to define his parents, Lily and James, as Harry's nuclear family, the Dursleys (his muggle aunt, uncle, and cousin) as his extended family, and his mixed blood status as a result of patrilineal and matrilineal descent. Interesting class discussion takes place when defining a pseudofamily, or that family which substitutes for blood relations in a society. While other academics have ignored the role of family in Harry's life, it presents interesting questions for my classes because it is coupled with the emotional meaning of the word, home, a term with intimate meaning for students. They travel from *comprehension* to *application* and *analysis* on an emotional as well as cognitive level.

The books are replete with examples of a Dickensian attitude toward relatives who abuse and neglect their kin. The Dursleys are the personification of evil in Harry's life. He is enslaved by their ignorance and intolerance and has literally, no option, but to follow Hagrid when invited to escape their bigotry. He begins a quest to find his family, most poignantly as he sees his desires reflected in the Mirror of Erised in *The Sorcerer's Stone*. The orphan boy finds the mysterious mirror while escaping capture during a midnight quest. He knows he is alone but as he looks in the mirror, he sees a group of other people.

> "Mom?" he whispered. "Dad?"
> They just looked at him, smiling. And slowly Harry looked into the faces of the other people in the mirror and saw other pairs of green eyes like his, other noses like his, even a little old man who looked as though he had Harry's knobby knees—Harry was looking at his family for the first time in his life. (Rowling, 1997, p. 209).

Dumbledore later tells Harry, "(The mirror) shows us nothing more or less than the deepest, most desperate

desires of our hearts. You who have never known your family, see them standing around you" (p. 213). Here, then we have the secret to understanding Harry Potter, his deepest desire is to know his family, to experience family, to be a part of family. Brookfield (1987) reminds us that the genesis of critical thought is in the ability to be "actively engaged with life" (p. 5). It is the link with his sacrificial parents that provides this engagement with life for Harry in an existence otherwise devoid of passion or joy. In *Chamber of Secrets*, we see Harry on his twelfth birthday on Privet Drive. "No cards, no presents, and he would be spending the evening pretending not to exist" (Rowling, 1999, p. 7) and in the *Prisoner of Azkaban*, we see Harry literally escaping from Privet Drive for an early return to Diagon Alley and a certain measure of freedom. By the age of 14, in *Goblet of Fire*, we see the same ache in Harry, "What he really wanted (and felt it almost shameful to admit it to himself) was someone like – someone like a *parent*: an adult wizard whose advice he could ask without feeling stupid, someone who cared about him" (Rowling, 2000, p. 22). And so, we trace Harry's longing for family. My students feel something akin to obligation to fill the void in their hero's life and tackle the job of finding a pseudofamily for Harry since his own is unavailable to him by virtue of death (his family of origin) or thick headedness (his extended family, the Dursleys). They enlist his friends, Hermione and Ron, but must acknowledge the lack of parental guidance in such an arrangement. They name the Weasleys although they exert no authority over Harry. They are happy when they find Sirius Black's connection but it is too tenuous, too restrained by problems, and too brief to be a lasting solution to Harry's dilemma. Some of my students enlist the professors and other students at Hogwarts into family for Harry but we continue to be aware of emotional distance and some combination of distrust and respect between Harry and his teachers. The meaning and necessity of family have allowed for some of the livelier discussions in the classroom. This exercise in Bloom's levels of application and then analysis allows students to use the information they receive through the books to create new ideas and find new solutions for Harry.

As we broaden our look at other social institutions then, parallels are readily apparent. The medical institution makes use of gatekeepers to define wellness and sickness. When Gilderoy Lockhart, a teacher, mistakenly assumes the role as medical professional in *The Chamber of Secrets*, there are painful repercussions for Harry. There is a sick role at Hogwarts with a code of behavior expected for patients and an expectation for their own will to heal. The series indicates an interesting mind/body tie in *The Prisoner of Azkaban*, with the kiss of the dementors resulting in life being sucked out of their victims. This is reminiscent of losing your soul, suffering the depth of despair, as opposed to more organic, traditional means of death. It is a reminder of the results of depression and the rise of respectability of mental illness in the current medical community.

The education institution has been widely reviewed by other authors (Pinset, 2002; Lacoss, 2002; Hopkins, 2003; Smith; 2003). Common among these works is the reflection of the School Boy Hero in British literature and the belief of the importance of public school connections for life success. Certainly, Harry's success on every level depends on his school experiences and this is also true for many of my first generation students. Smith reminds us that, "The Duke of Wellington conveyed the significance of the British public school most famously when he claimed that, 'The Battle of Waterloo was won on the playing fields of Eton" (p. 73). For many of my students, the battle for life options is won in their college classroom. Booth and Booth (2003) address lessons American schools can learn from Hogwarts School of Witchcraft and Wizardry. They conclude that housing students of all ages in one educational institution has a positive effect on development and education, that the competition inherent between houses and students is appropriate and motivating, that the prefect system emphasizes leadership and group cooperation, and that the emphasis on examinations (e.g. O.W.L.S.) is not as adequate a measure of academic success as regular tests and papers. Discussion of these concepts draws parallels from Hogwarts to our own residential campus.

Students are encouraged to reflect on the manifest and latent functions of education as they pertain to Hogwarts. The manifest function, the transmission of knowledge, is evidenced through the pedagogy at the school. The latent functions of transmitting culture, promoting social integration, maintaining social control, and serving as agents of change are also readily identifiable for students. Transferring this understanding from Hogwarts to their own educational processes provides an opportunity for students to exercise critical thinking about what they are really being taught in American classrooms. Discussions regarding the roles of teachers and students and opportunities for alternative education for students such as Hagrid are lively and exciting. The way that Harry Potter is introduced into educational contexts (such as the present volume) is diverse and interesting. *Publisher's Weekly* (2003) reports that the books were translated into Latin and Welsh in 2003 and Greek and Irish translations appeared in 2004. The hope is that being able to access Harry Potter in "dead" languages will elevate interest in both the study and culture of these languages.

Most of the criticism of the series has come from the religious right with concerns regarding legitimizing witchcraft in the eyes of young children and has led some communities to ban Harry Potter from school libraries. The ban went to the courts in Arkansas in a widely publicized case and Goldberg (2003) reports that the judge ruled, "Regardless of the personal distaste with which these individuals regard 'witchcraft,' it is not properly within their power and authority as members of the defendant's school board to prevent the students at Cedarville from reading about it" (p. 21). The argument has traveled the globe with the Russians deciding that Harry is not satanic (Goldberg, 2003, p. 1) and a report from the Vatican declaring of the books, "They are not bad or a banner for anti-Christian theology. They help children understand the difference between good and evil" (*American Libraries*, 2003, p. 20). Because my college is affiliated with a religious denomination, at the beginning of every semester I ask students if they are comfortable reading the series. None of my students have objected on religious grounds (some have objected because they do not want to do any supplemental reading of any kind, basically they may be classified as lazy). I have found several resources addressing Harry Potter's impact on religion and have these available for students. Killinger's (2003) *God, The Devil and Harry Potter: A Minister's Defense of the Boy Wizard*, Neal's (2002) *The Gospel According to Harry Potter: Spirituality in the Stories of the World's Favorite Seeker*, Griesinger's (2002) article from *Christianity and Literature* entitled, "Harry Potter and the 'Deeper Magic': Narrating Hope in Children's Literature and McVeigh's (2002) article in *Renascence: Essays on Values in Literature* entitled, "Is Harry Potter Christian?" are readily available for students interested in more in-depth discussion on the topic of religion and its relationship to the Harry Potter series. Finding sociological interpretations of the religious in Harry Potter's life is a little more demanding for students. Rowling avoids specific references to what Durkheim, who published a definitive work on sociology of religion in 1912, defines as a "unified system of beliefs and practices relative to sacred things" (Schaeffer, 2002, p. 309). What we see operating in the wizard world is an implied code of ethics that is difficult to decipher without context. My students have suggested that Dumbledore's wisdom comprises the code of wizardry that promises the most success for Hogwart's students and have enjoyed working on an assignment to write "Dumbledore's Words of Wisdom" as a frame for guidance on a higher or religious plane. It is valuable for students to evaluate the series based on their own religious ideals and the ideas of others. Critical thinkers learn to find new solutions to problems they might not have even considered problematic in their own past. Some of my students would not have evaluated the books on their own but would have taken direction from their pastors or parents with regard to their material. Their determination to think for themselves is clear evidence of advancement in thinking skills.

The social institution of government has received attention from Rowling's critics and analysts. The sociological study of government and economy is concerned with questions of power and authority and political behavior to include political socialization, participation, and apathy. Children's literature is remarkable for characterizations of children in positions of great power or authority, a departure from what most children experience in their own environments. Anatol (2003) examines Harry Potter from a postcolonial perspective writing that, "Rowling's novels seem particularly influenced by the British adventure story tradition, which promoted 'civilized' values—resourcefulness, wits, ingenuity, and hierarchy headed by a *legitimate* democratic authority" (p. 166). She sees the inhabitants of Hogwarts and its environs as "morally enlightened, friendly, respected and respectful, and powerful in many ways" (p. 167). This powerful participatory citizenry is expected from a generation close to the threat of totalitarian domination so narrowly escaped by the heroics of the infant, Harry Potter. Hall (2003) sees Rowling's wizard world as,

> Neither an anarchy nor a dictatorship and appears at first glance considerably more attractive than the Muggle world. However, one finds that it does not recognize the rule of law (in the Dicey sense). This absence of an understanding of the rule of law represents a fault line in the terrain of the wizard world on which the forces of chaos can apply maximum pressure. (p. 147)

She reports that A. V. Dicey (1908) defines a society that operates under a rule of law as meeting three criteria, (a) punishment for infractions of previously established rules, (b) equity of application, and (c) constitutional norms developed by representatives of the society for which the rules are established. The government of the wizard world does not meet these criteria and is thus vulnerable for forces of chaos such as those promulgated by the reappearance of He-Who-Must-Not-Be-Named and his followers.

Wizard government is composed of the Ministry of Magic comprising the legislative, judicial, and executive functions of a democratic model headed by a senior representative, in this case, Cornelius Fudge. Within the Ministry, are seven departments of varying levels of status and responsibility. On a global level, this Ministry seems to represent the wizards from the Empire for the larger International Confederation of

Wizards. "The ministry's lawmaking role does not seem subject to any form of democratic scrutiny: Arthur Weasley, for example, is able to draft the law against enchanting Muggle artifacts with a loophole to allow him to pursue his own hobby unchecked" (Hall, 2003, p. 49). We see the ministry acting as judge and jury in many examples in the series. Given the opportunity to search out these examples, students often become indignant that the ministry has such sweeping power and then must redesign the responsibility and scope of governance with regard to Hagrid's being sentenced to Azkaban or Buckbeak's death sentence. Hermione's failure to ignite outrage over the plight of the house-elves is evidence of the complacency of this populace with regard to those institutions they feel do not threaten their existence. Comparing Hermione's grass roots efforts with the furor caused by Sirius Black's escape from Azkaban illustrates the placement of meaningful power in this culture as well as in our own, where grass roots efforts are so often vulnerable to those wielding significant political power.

Mendlesohn (2002) finds Rowling's work a departure from other children's literature in the way she depicts power and authority. She refers to C. S. Lewis' *Chronicles of Narnia*, *The Wizard of Oz* series, and Nesbit's *The Story of Amulet* as reflective of definitive political persuasions. She writes,

> Superficially, Rowlings stands apart from these classics. There is no obvious political or evangelical intent other than relaying an oft-told tale about the battle of good against evil….While Rowling clearly does not intend to engage with ideology, its role in her work is inescapable. Rowling's Harry Potter books are rooted in a distinctively English liberalism that is marked as much by its inconsistencies and contradictions as by its insistence that it is not ideological but only 'fair.' (p. 159)

Perhaps it is this contradictory nature of liberalism and classicism that creates a challenge for students to identify both government and religion in the series. While "fair" becomes the ideological guide for both governing and worship, readers recognize that not all of life is fair, as indeed, it is unfair to lose one's parents prior to the ability to remember them. It is unfair to have expectations of greatness in a culture which is a mystery. In a world of elevated "fair," social institutional support is tenuous, at best. It is difficult to be fair at an institutional level.

Sociological Theory

An introduction to sociology includes exposure to sociological theories. The metaphor of a pair of glasses or set of lenses seems to resonate with my students. I explain that a theory is a way of framing the world, of gaining focus. To see things with one set of lenses is to account for society through functionalism. To change those lenses and see things with a different perspective allows for an understanding of society as explained by a conflict perspective. Trying on yet another set of lenses allows meaning of interactionist perspective to define social life. The capstone project for this course it to frame the wizard world in one of these theoretical contexts. This task requires the ability to synthesize material and then to evaluate it in a very personal way to determine which theory best represents Harry's world for each student and thus, their own world. Because each theory provides possible explanations, there is no wrong answer for this assignment but choice is a matter of personal understanding and intellectual organization.

Most of my students select functionalism in the tradition of Talcott Parsons, the modern American father of social stability and survival. Schaeffer (2002) defines functionalism as "the way that parts of a society are structured to maintain its stability" (p. 13). The emphasis on stability with a combination of manifest and latent functions and dysfunctions resonates with students. The easy task of identifying functionalist elements of the wizarding world is, sometimes, too tempting to ignore requiring the highest levels of knowledge and comprehension. Beginning with Harry's socialization process and working through the functions of stratification (to fill otherwise difficult positions such as surgeon or professor), continuing to the functions of social institutions and concluding with the argument that the wizard culture has survived hundreds of years, students travel a relatively easy functionalist journey through wizardry because it is largely grounded in *knowledge* and *comprehension*.

More insightful students tackle the conflict perspective. The very thematic struggle between good and evil, the class differentiations, the unjust poverty of the Weasley family, the hidden curriculum of Hogwarts, the wide gaps between the mudbloods and the purebloods are all evidence of conflict theory, as originated by Karl Marx and modernized by Mills, in Harry Potter's world. I confess that this is my personal favorite and I silently rejoice when a student announces this as their theory of choice because it provides validation of Bloom's third and fourth levels of cognitive thought, *application* and *analysis*. Schaeffer (2002) states,

> Like Marx, contemporary conflict theorists believe that human beings are prone to conflict over such scarce resources as wealth, status, and power. However, where Marx focused primarily on class conflict, more recent theorists have extended this

> analysis to include conflicts based on gender, race, age, and other dimensions. (p. 195)

Perhaps because conflict is the grandfather of feminism, it is rewarding to hear a student analyze the story from a feminist eye. It is equally rewarding to hear a student renounce slavery as an institution as it is reflected in Rowling's eyes. Students selecting conflict as the frame for the series evidence a deeper level of critical thinking, not accepting things as they are but looking for problems and thereby, solutions.

The least chosen theoretical option for my students has been interactionism. It may prove difficult for students to interpret a society through a micro lens and it is my belief that introductory texts are not as clear when it comes to microsociological theory. Schaeffer (2002) tells students that understanding of the social environment comes through analysis of everyday interactions. Thus, it is the responsibility of the student to detail and classify interactions on a personal level in order to make generalities about the way wizard culture operates. While they can grasp the importance of the common meaning of symbols accounted for in this perspective, the task of categorizing and interpreting human interaction seems overwhelming. All but the hardiest, fail to recognize that this how they create meaning in their own lives. Through their own judgments of the Dursleys or their perception of Snapes' antagonism toward Harry, they can come to the understanding of the underlying theme of fairness referred to by Mendlesohn (2002). This then, in the end, is the proof of the real ability to *synthesize* and *evaluate*. With less help from both text and without obvious references to the wizard applications, interactionism requires higher level understanding that is rare among my introductory students.

Perhaps LeLievre (2003) understands the differences between the theoretical lens best when she defines the action of the Harry Potter's world as,

> Mutually exclusive paradigms of imaginative response to the environment within which human beings exist: one which constructs that environment as limiting and attempts to transcend its limits by gaining power over it, and one which attempts to adapt to existence within the limitations the environment imposes and thus to ensure survival. (p. 25)

Understanding Harry Potter through a theoretical perspective must be framed as a method of survival; of Harry, of his friends, of Hogwarts, and of life as he comes to know it. It creates one means for evaluating my teaching of the sociological imagination.

And so we return to C. Wright Mills. The question at the end of every semester is not can students answer questions regarding wizard society, but through understanding that society, can they better answer questions regarding their own? For the educator, the question is, have students become better critical thinkers or developed higher levels of cognitive skills? Have I been a facilitator in the sense of Vygotsky, bringing students to an increased awareness and understanding? In the end, the creative thinking required of social scientists should ring as true for students in their own lives as in the life of their fictional protagonist. The real test will come as these students mature and seek that which is significant in their world, that which gives their own culture and society meaning.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 178-182
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

Dialogue, Monologue and Soliloquy in the Large Lecture Class

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Large lecture sections are a necessary and often valuable component of the college or university curriculum; however, many educators are frustrated by the impersonal nature of such classes and the potential ineffectiveness of their lecture presentations. Examining the theatrical concepts of *dialogue*, *monologue* and *soliloquy* provides teachers with a conceptual platform from which to evaluate their own modes of communication while also encouraging a mindset that promotes a more personal and productive environment in their classrooms.

Many college and university teachers who teach large lecture sections express similar frustrations. Comments such as "The students don't seem interested" or "I feel like I'm boring them!" can often be heard in discussions with colleagues, and for good reason; such difficulties reflect what many researchers believe to be the central theoretical weakness underlying large classes and lecturing in general (e.g., Barber 2007; Cooper & Robinson, 2000; Geske, 1992). At the risk of oversimplifying, many of the standard complaints about the large lecture course can be traced to the impersonal nature of the classroom experience (Stanley & Porter, 2002). "Ineffective," "cold," "distant," and even "boring" – each of these descriptions can be linked in some way to an impersonal communicative environment. Conversely, the strengths of the small seminar over the large lecture – "close, personal faculty-student interactions, the verbal exchange of ideas and opinions, and extensive written work by students with substantial feedback from the faculty instructor" (Hensley & Oakley, 1998, p. 48) – are also grounded on personal contact, or at least on a setting in which the student feels a personal connection with the instructor and the material being presented.

While few educators would argue that large lecture courses are preferable to small classes, there still exist plenty of situations where the large lecture course can be an effective and even necessary part of the curriculum. Traditional lectures, or any of the hybrid forms of lecture-presentation appearing today, can be a useful tool in the educator's repertoire (Brookfield, 1990). Unfortunately it is difficult to establish a personal link with 500 students in the aloof surroundings large courses often require. Many teachers have proposed creative ways to establish a more intimate atmosphere within their large classes and to lessen the reliance on traditional lecturing. Henley and Oakley (1998) incorporated group debate to provide student-student interaction, while Wahlberg (1997) modified her lectures so that she and the class were cooperating as a study group.

Creative approaches such as these are certainly useful in mending weaknesses of the large lecture situation and encouraging those personal connections that are more desirable to both students and teachers. However, there will still exist situations where lecturing is necessary, due to the nature of the material to be covered or time constraints that appear during the semester. The following discussion is geared towards those situations where the educator chooses to present information in either a traditional lecture section or a creative alternative. In a sense, what is being proposed is a frame of mind or attitude more than any particular technique, though specific mechanical aspects of the lecture can be modified in light of these ideas. Specifically, this mindset directly impacts the mode and tone of verbal communication between the teacher and students. Lecturing is oratory, something we as teachers must always remember, and no matter what philosophies may be generated or adopted to strengthen the educational process within a class, we must first successfully communicate with our students (Dubrow & Wilkinson, 1984).

Most teachers will alter their mindset, whether consciously or not, when moving from a small group presentation to lecturing in front of a large group (Devlin 2006; Cooper & Robinson 2000). While certain modifications will be necessary (remembering to speak loudly and clearly, making gestures larger, looking around a large space, etc.), others may be detrimental to the effectiveness of the lecture. Instead of redirecting one's conceptual framework, Cleveland recommended that we "adopt a philosophy for teaching a large class that is no different than one for a small class" (Cleveland, 2002, p. 17). This thought could be adjusted slightly to say: do not alter your mindset, and subsequently your mode of communication, when you step in front of a large class. Too often educators adopt an attitude that predisposes them to treat their large classes in an impersonal fashion (Long & Coldren, 2006). Prior to the first lecture the teacher should have constructed a vision of the ideal relationship between themselves and their class, a vision that is realistic,

proactive, and one that will provide definition when addressing the class. In a similar vein Cleveland also noted that teaching is a performing art, and there is much to support her observation (Sarason, 1999; Timpson & Burgoyne, 2002). It should be beneficial then for those who are placed in large lecture sections to prepare themselves mentally – and to evaluate their classroom performance – in light of the performing arts, and in particular the world of theatre.

One set of terms used in discussions of small and large classes (as well as lecturing in general) are *dialogue* and *monologue*. Critics of lecturing note that small group environments enable a dialogue to form between the students and teacher as well as between students themselves (Skidmore, 2006). Lecturing can become a monologue, with the teacher professing his or her knowledge to a passive audience. In this context monologue is seen as something to be avoided whereas dialogue is held up as an ideal form of educational communication (Bannink & van Dam, 2007; Adams, 2006). This taxonomy is restricting, regardless of the obvious benefits of interactive and cooperative learning inherent in a dialogue. Young teachers in particular are pushed into seeing only two options when lecturing: to attempt to establish dialogues with the large section or to resort to the "boring" monologue. Yet when the terminology of theatre is examined, there appears a third option, namely *soliloquy*; and the definitions of each reveal a viable middle ground upon which educators can construct a functional and beneficial philosophy of lecturing.

The Oxford English Dictionary defines *dialogue* as "the conversation written for and spoken by actors on a stage" or "a conversation carried on between two or more persons." It is a verbal exchange of ideas between people, and as such fits the standard vision of how dialogue would function in the classroom. The same dictionary defines *monologue* as "a long speech by one actor in a play" or "a scene in a drama in which only one actor speaks." It is a generally uninterrupted speech or narrative that tells a complete story or expresses a complete line of thought. More importantly, the monologue is either literally or figuratively delivered to another character or characters, whether these characters are onstage at the time or simply part of the drama as a whole. Though seemingly in accordance with a lecture situation, there are subtle points within this definition with significant implications for the teacher. This becomes apparent when monologue is compared to soliloquy; in fact, it is this third term that is more in line with most teachers' perspective of how a 'bad' lecture is viewed. The Oxford English Dictionary defines *soliloquy* as "an instance of talking to or conversing with oneself, or of uttering one's thoughts aloud without addressing any person." A soliloquy is thus a monologue delivered when no other characters inhabit the stage or dramatic space. The actor is alone with the character's thoughts and feelings, and presents the illusion of sharing these unspoken internal states.

The distinction between monologue and soliloquy is critical, both to actors and educators, and the application of these concepts to a lecture situation can have immediate and favorable results. Generally speaking, monologues usually have a "discovery," or some point the character is trying to get across. More importantly, monologues are speaking "to" or "with" someone. In the theatre, this other person is onstage with the actor. For the lecturer, to view their presentation as a monologue means bringing the students onstage with them, emphasizing that what is occurring is an interactive process between co-contributors. In a monologic situation, with the target of the speech being directed to another, the motivation or purpose of the speech is verbalized. In other words, the actor/teacher explains his or her reasoning, an action that Brown and Atkins (1988) saw as necessary for the successful lecture. At the same time, monologues use personal, directed pronouns such as "you," "I," and "we" that strengthen the participatory nature of the communication.

The soliloquy is different in many noteworthy ways. To begin with, to whom is the soliloquy directed? The speaker is reflecting upon his or her own thoughts and feelings, not responding to another in a dialogue or dramatic event. A soliloquy is talking to oneself, albeit in a communicative setting. In the theatre, the intended recipient is the audience, who is allowed a glimpse inside the actor's internal world within the larger context of the surrounding drama. In the classroom, the recipient is the student, no longer an active participant in the communication but a passive witness to a solitary action by the lecturer. In the soliloquy, any motivation or purpose is already assumed by the speaker, so it becomes more a stating of opinion as opposed to the presenting of a reasoned point. Often in these situations personal pronouns are replaced with impersonal or reflective pronouns such as "she," "he," "it," or "one," reinforcing the distance between the speaker and the hearer.

Monologue is a personal and participatory speech act, even though only one person may be speaking. Soliloquy, however, is impersonal, in that no one other than the actor is intended to hear these words. It is these distinctions that can prove invaluable to the lecturer. These definitions and the concepts surrounding them are a means by which educators can evaluate their classroom performance in terms of the level of personal communication occurring. Far from supplanting other approaches, this mindset reinforces other attempts to make the large lecture section more intimate and successful. Modes of communication

underlie all pedagogical methodologies, and to ignore how one is speaking, or the frame of mind that influences the choice of words or layout of the presentation, might disable any efforts at improvement. When Fisher, Alder, and Avasalu (1998) established criteria for evaluating lectures from both the students' and teachers' perspectives, most of their terminology (e.g., "provide clear explanations," "present material in an interesting way," "stimulate students' interest," "arouse students' curiosity," "use examples relevant to students," "interact with students") centered on the teacher communicating in such a way that each student is impacted upon an individual level. Bartlett (2003, p. 12) described a successful large section lecturer as "casual and conversational, as if he were chatting with a friend," noting that personal elements, even anecdotes, are critical to success. In discussions of collaborative or cooperative learning (be they student/student or student/teacher), a great deal of importance is placed on dialogic encounters (Panitz 1997). While this might seem unlikely in a large lecture section, if the educator is viewing their presentation as a monologue and not a soliloquy, their presentation will reflect the conversational character that is so useful in transmitting and comprehending new thoughts (Bruffee, 1984).

At the most basic level such an approach is keyed into the choice of words teachers use during a lecture and the manner in which he or she speaks. Terminology, tone of voice, and length of phrasing – all are liable to variation depending upon who is seen as the intended audience. Such variations might seem to be a minor part when considered within the context of an hour-long lecture, but it is these subtle inflections that transmit the teacher's state of mind to the students. A few indiscreet words scattered throughout the presentation might be all that it takes to convince students that the teacher is not speaking to them, but merely sharing his or her thoughts to no one in particular. The casual use of advanced terminology with which the students are not familiar, or the appearance of outdated slang in the presentation can indicate that the teacher is no longer concentrating on the audience. On the other hand, too much focus on word choice could of course paralyze the speaker and defeat any attempt to create a personal, communicative forum. Yet if teachers adopt the mindset that they are speaking "with" students, or participating in a monologue and not a soliloquy, then there is less need to focus solely on terminology but instead concentrate on the topic at hand and the individuals with whom they are communicating.

One instance where terminology can reveal a teacher's mindset is found in the use of the first person plural pronouns "we" or "us." Technically these words should join the teacher and students into a unified linguistic entity. Yet if these words are used in an impersonal context that has alienated the students, then the result can be condescending or patronizing instead of unifying. A statement that begins with "We know that…" or "As we've seen…" becomes authoritative as opposed to inviting, in that students who see themselves as disassociated from the learning environment hear the "we" as representing the teacher's scholarly community, not the community of learners present in the classroom. Likewise any attempt to use a personal or participatory example while speaking in a soliloquy mode will be perceived as artificial. If, when studying a piece of music, the teacher says, "So what do we hear at this point?" many students will not respond. Does the teacher want to know what I am hearing, or what my friend is hearing? Is it assumed that we are hearing the same thing? In fact, the question can imply that there is a single, correct way of hearing the passage that all listeners share. This includes the teacher, of course, so in a sense the students witness the teacher asking the question of themselves, and if the teacher is lecturing on this particular piece of music then the class knows that the teacher is already aware of what he or she is hearing. Eventually many students cannot help but believe that the question was not addressed to them or even meant to be answered.

At a higher stage, the distinctions between monologue and soliloquy can affect the overall structure and organization of the lecture. For instance, Brookfield (1990) gave an example of what he called the "Paced Presentation" in a lecture. In this model he assumed including the students on a personal level in the process, whether it is asking questions of them at strategic points in the presentation or having them write something in response to a topic just discussed. Such an approach helps to create a monologic ambience by shaping not only the length and complexity of the ideas being expressed, but also the length of phrases, the amount of information per sentence, and even the length of each sentence. At each level the pacing or structure resembles that of a conversation and hence brings the students "on stage" with the lecturer. From the student's perspective a more engaging form of speech and a monologic structure to the lecture both allows and encourages students to participate in the lecture – even though they are not speaking – bolstering their attention during the lecture and encouraging immediate contemplation and interpretation of the material (deWinstanley & Bjork, 2002). Frederick (2002) also spoke of incorporating questions within the lecture, or even beginning a class with a question or a challenge to the students to interpret some aspect of the material under study. His examples of possible questions – "What do you see?" "What's going on here?" or "What do you think it means?" – clearly reveal that his choice of terms direct the question to each student as an individual, not to the mass as a single

entity; such questions come across as genuine curiosity or information gathering, not as rhetorical tricks directed towards an ambiguous or fictional collective.

It should be noted that too personal a mode of speaking could eventually work against the lecturer. While the demerits of a dry and pedantic lecture seem self-evident, a presentation that is too relaxed or colloquial can lead to difficulties as well (Levin & Gray, 1983). A "conversational" approach, or achieving the level where one comes across as "chatting" with the class, can actually lead to a loss of focus for a portion of the class. A certain measure of rhetorical discipline is necessary to successfully present the logic and conclusion of a given topic within the time allotted. Extremely relaxed lectures might be "fun" for a while, but most students want more. Likewise, it is also noted that a teacher's choice of words is but one aspect of their presentation that imparts a personal or impersonal character. Body language, facial expressions, eye contact with students, addressing students by name – all contribute to creating a more personal environment, and all come more naturally when the teacher is viewing their presentation as a discourse or monologue with the students.

Considering the lecture as a mode of theatrical discourse and understanding the distinctions between dialogue, monologue and soliloquy are a useful means for evaluating the mindset a teacher possesses as well as judging the effectiveness of certain oratorical techniques in a large lecture course. The ideas proposed here can be considered a lens through which experienced teachers can re-evaluate their performance in front of large sections, a conceptual tool that can assist in modifying and ideally improving a lecturer's technique. However, these concepts are particularly pertinent to younger teachers, especially graduate students and newly hired faculty, who are about to, or are in the process of, tackling their first large lecture. The comparison of monologue and soliloquy creates a tangible framework within which practical presentation techniques can be examined and evaluated. If employed early enough this approach can establish patterns of discourse that positively impact upon a long career in teaching and help to maintain a participatory and successful learning environment in any classroom.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 183-190
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

In-Class Debates: Fertile Ground for Active Learning and the Cultivation of Critical Thinking and Oral Communication Skills

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Students learn in diverse ways; therefore, instructors must utilize a wide variety of instructional strategies. Students benefit when instructors use instructional strategies that promote active engagement. In-class debates cultivate the active engagement of students, yet participation in debates is often limited to students involved in debate teams. The benefits of using in-class debates as an instructional strategy also include mastery of the content and the development of critical thinking skills, empathy, and oral communication skills. Debate as an instructional strategy, however, has its opponents. Some believe debates reinforce a bias toward dualism, foster a confrontational environment that does not suit certain students, or merely reinforce a student's existing beliefs. A variety of debate formats are described which address these criticisms including meeting-house, four-corner, fishbowl, think-pair-share, and role-play debates. Finally, issues related to the assessment of in-class debates are addressed such as whether the students are assessed individually or as a team, what aspects of the debate are assessed, and whether the instructor and/or students will do the assessment.

Debates date back over 4,000 years to the Egyptians (2080 B.C.), and debates as a teaching strategy date back over 2,400 years to Protagorus in Athens (481-411 B.C.), the "father of debate" (Combs & Bourne, 1994; Freeley & Steinberg, 2005; Huryn, 1986; Snider & Schnurer, 2002). Yet in most high schools and universities, the only students who participate in debates are those on competitive debate teams (Bellon, 2000). Debate refers to the process of considering multiple viewpoints and arriving at a judgment, and its application ranges from an individual using debate to make a decision in his or her own mind to an individual or group using debate to convince others to agree with them (Freeley & Steinberg, 2005). Just as writing assignments have been incorporated across the curriculum, debates have been successfully used in a variety of disciplines including sociology, history, psychology, biotechnology, math, health, dentistry, nursing, marketing, and social work. Further, debates in a written format have even been used effectively in online courses (Jugdev, Markowski, & Mengel, 2004).

Benefits of In-Class Debates

Students learn more effectively by actively analyzing, discussing, and applying content in meaningful ways rather than by passively absorbing information (Bonwell & Eison, 1991); therefore, students benefit when instructors utilize instructional strategies that promote active engagement. Bonwell and Eison define active learning as "anything that involves students doing things and thinking about the things they are doing" (p. 2). Meyers and Jones (1993) define active learning as anything that "provides opportunities for students to talk and listen, read, write, and reflect as they approach course content" (p. xi). They contend that students learn best when applying what they are learning and that teachers need to use a variety of instructional strategies, since students learn in different ways. Carini, Kuh, and Klein (2006) report that student engagement is linked positively with critical thinking and grade point average, particularly for students with lower Scholastic Aptitude Test scores.

In-class debates cultivate the active engagement of students, placing the responsibility of comprehension on the shoulders of the students (Snider & Schnurer, 2002). The students' approach dramatically changes from a passive approach to an active one (Snider & Schnurer, 2002) and "students place a higher value on learning by participating than on learning by being lectured at and receiving information passively" (Berdine, 1987, p. 8). As one student said of debates held in an International Management course at the University of Glasgow, "In most classes you sit around very quietly at a table and get lectured at. This was an opportunity to interrelate with the subject itself and let the lecturer stand back for a while; and let us actually teach each other" (Walker & Warhurst, 2000, p. 41). Bauer and Wachowiak (1977), who taught separate sections of the same course at the same university, Introductory Personality, decided to work together to hold seven debates. Each of these seven debates was held twice, once in each of Bauer and Wachowiak's sections of Introductory Personality. Each debate consisted of two teams, a team from Bauer's class consisting of Bauer and a student from his class, and a team from Wachowiak's class consisting of Wachowiak and a student from his class. The instructors felt that "the opportunity to watch their professors dodging the verbal slings and arrows of each other was a novelty which aroused student interest and sharpened critical

thinking" (p. 192). Dundes (2001) reported that students in her Criminal Justice course at Western Maryland College, who did not typically speak in class, were more likely to share their opinions during a debate.

Lewin and Wakefield (1983) taught a psychology course at California State College in which they debated each other in class to expose students to both sides of the issues. The professors concluded, "Although both of us had taught similar material in the past, the debates forced us to re-read and re-think both our own and the opposing position more intensely than is necessary to repeat lecture material" (p. 116). Just as these professors needed to prepare more intensely for participation in a debate rather than a lecture, so also students need to master the content more thoroughly when preparing for a debate (Parcher, 1998). About 78% of the 544 students Combs and Bourne (1994) surveyed in a senior-level marketing course stated they believed they learned more through debates than lectures.

Debates afford many benefits besides promoting active engagement and mastery of the content. Because debates require listeners and participants to evaluate competing choices (Freeley & Steinberg, 2005), they follow Vygotsky's (1978) call for the type of social interaction that develops higher-order psychological functions as well as critical thinking skills by moving up Bloom's (1956) Taxonomy (Elliot, 1993; Gazzard, 2004; Gorman, Law, & Lindegren, 1981; Jugdev et. al, 2004). The lower order thinking skills of knowledge, comprehension, and application focus on rote learning or *what* students should think, whereas the higher order thinking skills of analysis, synthesis, and evaluation focus on *how* to think: "The short-term objective of acquiring knowledge should be tempered with the long-term goal of training the mind to think analytically and critically" (Vo & Morris, 2006, p. 16). Instructional strategies such as debate and case studies are better suited to the development of students' higher order thinking skills than traditional instructional strategies such as lecture (Roy & Macchiette, 2005). Critical thinking skills used in a debate include defining the problem, assessing the credibility of sources, identifying and challenging assumptions, recognizing inconsistencies, and prioritizing the relevance and salience of various points within the overall argument. Speaking of the power of debate, one student at Southwestern University said, "I will forever approach history textbooks with scrutiny rather than blind faith that the texts are true" (Musselman, 2004, p. 346). Freeley & Steinberg (2005) contend that for over 2,000 years, academic debate has been recognized as one of the best methods of learning and developing critical thinking skills.

There is more information now than ever before, and the pace of change will likely continue to be rapid in future generations; therefore, educators must focus less on teaching facts and more on teaching students how to use information. In the past, vocations were often passed on from generation to generation, but now most individuals have several different careers in their lifetime (Snider & Schnurer, 2002). Although debate certainly requires the mastery of content, it also demands the mastery of critical thinking skills which can be applied to changing situations and new information.

In addition to critical thinking skills, debates also demand the development of oral communication skills, which are vital for success in most careers (Combs & Bourne, 1994). "Debate involves not only determining what to say but how to say it" (Roy & Macchiette, 2005, p. 265). Williams, McGee, and Worth (2001) surveyed 286 participants of competitive debate teams at 70 different universities. These students rated improved communication skills as the most substantial benefit of debate participation. Similarly, the marketing students surveyed by Combs and Bourne (1994) reported a statistically significant improvement in their and their peers' oral communication skills as a result of in-class debate participation.

Surveys of business leaders reveal the perception that college graduates do not possess adequate oral communication skills (Combs & Bourne, 1994; Cronin & Glenn, 1991): "Except for students majoring in communication, most undergraduates take at most one course emphasizing oral communication skills; therefore most non-speech majors have little or no opportunity to refine and reinforce their oral communication skills" (Cronin & Glenn, 1991, p. 356). Alumni also have identified practice in oral presentations as the most prominent gap in their educational experience (Dundes, 2001). Steinfatt (1986) argues that imbedding oral communication exercises in various courses across the curriculum increases the students' oral communication skills as well as their learning of the discipline-specific subject matter. Participants also must hone their listening skills in order to give effective rebuttals (Allison, 2002; Combs & Bourne, 1994): "Debate changed my life because it taught me to listen" (Snider & Schnurer, 2002, p. 9).

Debating opens opportunities for the development of empathy. As one student said, "When you went to the debate you listened to both sides of the argument, which I thought was the main strength of the debates, that you do see both sides, rather than just seeing it from one point of view. Lecturers tend to have their own opinion, so in this way we heard both sides of the argument" (Walker & Warhurst, 2000, p. 40). Another student said that debates "taught me that I shouldn't be

so narrow-minded and should hear things out until I make a final decision" (Goodwin, 2003, p. 161). Schroeder and Ebert (1983) assert that debate is one way to minimize instructor bias; furthermore, when students defend a position they oppose, they must at least temporarily transcend their own bias. By learning about both sides of a controversial topic, students are more open-minded and better able to see another person's viewpoint (Berdine, 1987).

Discussions are used more frequently than debates in most classes. Goodwin (2003) asked her students to contrast debate and discussion. The students noted that in debates a variety of viewpoints are presented whereas in a discussion this does not always happen. Additionally, debates require the use of logic and reason rather than merely a free expression of opinions and force participants to be prepared so they know what they are talking about. One student confessed, "Although I admittedly hated preparing for the debates and would rather have just had discussion every week (to avoid doing the work), I certainly learned a lot more as a result of the debates" (p. 160). Osborne (2005) used debates in one section of world history and discussion in the other section. She reported that the non-debate class referred to the debate class as the "fun class" and that a higher percentage of students participated in the debates than the less-structured discussions.

In addition, while written essays are used more frequently than debates, Gregory and Holloway (2005) contend that debates extend students' critical thinking and argumentation skills more than essays and that they demand additional performance skills that essays do not. Assessing students in a variety of ways – with both writing and oral assignments – gives more students an opportunity to excel. One student said, "As someone who is dyslexic I have appreciated the opportunity to present something other than in written form" (p.635). Berdine (1987) gives his marketing students a choice between writing a term paper on a controversial topic or participating in an oral debate.

The Debate about Debates

Debate as an active instructional strategy has its opponents. Nancy Tumposky (2004) asserts that debates reinforce a bias toward dualism. Most debates present only two views, yet there might be multiple viable solutions or only one defensible point of view. Typically one student or a team of two or three students defends either the affirmative or negative side of a resolution through constructive speeches and rebuttals (Chial & Riall, 1994; Hopkins, 2003c). Musselman (2004) mitigates the bias toward dualism by assigning two to three students to be conciliators in each debate in her history courses. Two-thirds of the way through the debate the conciliators offer alternative or conciliatory positions to the two original, extreme positions. Crone (1997) has students represent three different views in each of the debates in his introductory sociology class at Hanover College. In a *Four Corner Debate,* students contemplate their opinions of a statement and then move to one of the four corners of the room, which are labeled "strongly agree," "agree," "disagree," and "strongly disagree." The students who have selected the same corner then work together to present arguments for their position. After each group defends its position, the students may switch corners if their opinions have changed. Then each group works to write a paragraph summarizing the four strongest arguments for their position (Hopkins, 2003a). Quotes from two International Management students illustrate that participation in a debate does not always result in a dualistic mentality: "In the end it's not always yes and no, it's always to find a middle way" and "You learned to see the grey, it's not necessarily black and white… you were aware of both sides of the issue" (Walker & Warhurst, 2000, p. 40). Similarly, Scannapieco (1997) reported that 76% of the dentistry students surveyed "agreed that participation in the debate helped them to realize that most issues are not clear cut" (p. 960).

Role-play debates (Hopkins, 2003b) provide an additional way to promote more than two viewpoints on an issue. In this format, students are assigned – individually or in small groups - to represent a stakeholder in a particular issue. For example, in a debate concerning whether bar owners should be responsible for patrons who drive drunk, some of the stakeholders might be a bar owner, a liquor store owner, the president of a local Alcoholics Anonymous group, a police officer, and the mother of a child killed by a drunk driver.

Sydney Duncombe (1988) uses another type of role-play debate in his American government classes at the University of Idaho. During the role-play debate, the professor wears different hats, such as a beret to represent the French multi-party system or a red, white, and blue straw hat to represent the American two-party system. In each debate, he uses up to five of his collection of 30 different hats to represent each view. The various hats represent political philosophers, nations, past or present political leaders, or stakeholders in a particular issue such as a hunter or a police officer when debating gun control. The hats help his students know which side he is representing at any given moment in the debate. Rebuttal follows rebuttal while he switches the hats back and forth. His students ask questions and point out fallacies during the debate, and he responds as the character he is currently playing would respond.

Nancy Tumposky (2004) asserts that debates foster a confrontational classroom environment and therefore

do not suit students from some cultures and women, who are often "uncomfortable with oppositional forms of communication" (p. 54). However, Lisa Elliot (1993), who conducted debates in her Psychology of Women class, felt that she addressed this concern by grading merely on participation rather than on performance. MacArthur, Ferretti, and Okolo's (2002) study of the participation of 11 and 12 year olds in debates demonstrated that students with and without learning disabilities participated equally in the debates, as did boys and girls. Others view the confrontational nature of debates as a potential benefit rather than a criticism of in-class debates. For example, Fisher et al. (2001) purport that participation in a debate empowers students to better handle conflicts outside of class. In "The Art of Debating" (1998, teacher information for module 7, ¶ 1) the authors assert that "most people do not know how to argue logically while staying calm" and that in-class debates can enable students to learn to argue constructively.

Other opponents believe that participation in a debate merely reinforces a student's existing beliefs rather than promoting an objective analysis of an issue. However, Simonneaux (2001) reports that in all of his studies, the only time the students in his biotechnology classes in southwest France have changed their opinions has been when they participated in a role play or debate. In Budesheim and Lundquist's (2000) research study of 72 students in three psychology courses at Creighton University, the students who defended a position they already supported almost always maintained their original viewpoint, whereas the students who argued a position inconsistent with their initial opinion were more likely to change their opinion. The response of the audience proved to be unpredictable, as only 52% maintained their original positions. Green and Klug (1990) reported similar results in that the sociology students who defended their initial viewpoint did not change their view, whereas those who were initially neutral or initially opposed the view they defended often changed their view in support of the side they debated. Johnson and Johnson (1985) found that 11 and 12 year old students who studied controversial issues independently were less likely to change their opinions than those who engaged in debate with others. A student, speaking of an in-class debate experience in a social work course, said, "I finally decided to convince myself that maybe my previous conviction was based on one-sided information, that there might be some truth to the other beliefs. To my surprise, I was amazed how quickly my stand and attitude changed" (Keller, Whittaker, & Burke, 2001, p. 352).

To avoid biased assimilation, Budesheim and Lundquist (2000) suggest requiring students to research both sides of the issue and waiting until the last minute to tell the debaters which side they will defend; alternatively, the authors suggest requiring students to defend one position during the debate and the opposing position in a written assignment. Budesheim and Lunhdquist state, "It is important that the format of the exercise encourages students to consider the opposite. Only then are students likely to be more open to new perspectives and spend less time reinforcing old beliefs" (p. 110). Thomas Moeller's (1985) developmental psychology students at Mary Washington College prepare to defend both sides of the issue and then flip a coin one week prior to the debate to determine which side they will represent. Mark Temple (1997) assigns roles only moments before the debate so that the students in his health classes will thoroughly research both sides of the issue.

Involving Many Students

In most debates, only two to six students actively participate in the debate; does this mean that the rest of the students are passive rather than active learners? Several debate formats, such as the Four Corner Debate described previously, address this issue by requiring all students to participate in some fashion. Temple (1997) suggests that professors require all students to prepare for a debate and then randomly select participants shortly before the debate. Schroeder and Ebert (1983) also expect all students taking their Business and Society courses at the University of Lethbridge and University of New Brunswick to be prepared for all the debates, as the participants are not selected until the day of the debate.

Elizabeth Musselman (2004) actively engages all of her history majors by assigning each of them a role in each of the six debates she holds every semester. Each student participates as an antagonist in two of the debates; the antagonists have the primary responsibility for defending the affirmative or negative position. Other roles include questioners and conciliators. The questioners come to the debate prepared with a question for an antagonist, the conciliators propose a compromise or alternative solution two-thirds of the way through the debate, and the remaining students write a one-to two-paragraph argument for one side of the debate. These students e-mail their arguments to everyone in the class prior to the debate and occasionally read their arguments during the debate.

In a *fishbowl debate*, the teacher divides the class into two groups, and each group works together to formulate arguments for their assigned viewpoint. After each side has presented their arguments, the groups give rebuttals back and forth. In another type of fishbowl debate the students are divided into three groups - one group of experts for each side of an issue and the remaining students represent the audience. In

this format, a group of chairs are arranged in a circle in the center of the classroom to create the fishbowl, and the rest of the chairs surround this circle. Each side has a turn discussing the issue with their fellow group members while sitting in the fishbowl, and then the audience group has their turn in the inner circle. Each group could have several turns in the fishbowl. A variation on that type of fishbowl debate involves arranging ten chairs in the middle circle in which three chairs are for each side of the issue and the remaining four chairs are for members of the audience. The six antagonists remain in the fishbowl during the whole debate, but those sitting in three of the other four chairs only stay for short periods of time so that all students have a turn sitting in the fishbowl. When someone in the audience hears something they want to respond to, they come and sit in the tenth chair, and then one of the other three must return to the audience so there will again be an empty chair.

In *think-pair-share debates*, students first think and make notes individually. Then they work in pairs to create lists of reasons to support both sides of an issue. Next, two pairs work together to come to a consensus on which side they wish to support and refine their list of reasons for that side. Finally, each group of four students shares its conclusion and supporting arguments with the whole class. This strategy requires all the students in the class to practice their writing, thinking, listening, and speaking skills.

In the *Lincoln-Douglas debate* format, one person confronts another person just as Abraham Lincoln and Stephen Douglas did during the race for the Illinois senate seat in 1858 (Roy & Macchiette, 2005). Time limits for each part of the debate are established and communicated to the participants. In this type of debate, each side, either one person or a team, gives an opening argument, rebuttals to the arguments of the other side, and a closing argument. Dundes (2001) increased student participation while using this debate format by breaking her class into six groups. Each group consisted of two debaters and about four audience members. The six small group debates were held simultaneously in different rooms. The same six topics were debated once a week for six weeks; each student participated as a debater in two of the six debates and as an audience member in the other four.

Two variations on the Lincoln-Douglas debate format are the meeting-house and problem-solving debate formats. In a *meeting-house debate*, each team gives its opening argument, and then the rest of the class questions the debaters or offers comments. The teacher, acting as the moderator, ensures that each side receives an equal amount of questions. To conclude the debate, each side gives its closing argument (Chial & Riall, 1994). Hopkins (2003c) describes various ways to ensure as many students as possible participate. In the three-card strategy, each student receives three cards and submits one each time he/she speaks. Once a student's cards have been used, he/she cannot participate again until all students have used all of their cards. Alternatively, students could be instructed to raise a hand the first time they wish to speak, raise a hand with one finger pointing up when they wish to speak a second time, and raise a hand with two fingers pointing up if they wish to participate a third time. As in the three-card strategy, a student cannot share more than three times unless no one else has a turn remaining.

The *problem-solving debate* involves eight participants, four on each side, debating a question such as "Should capital punishment be abolished?" In this format, the first two speakers present the historical and philosophical background information, the second set of speakers explains why changes are or are not justified, the third pair of speakers suggests a plan, and the last two speakers summarize the position of each team (Huryn, 1986).

Other professors encourage active engagement of all students through written assignments required of those who will not be participating orally. Moeller (1985) requires each student in the audience to submit a 250-word paper defending either the negative or affirmative position, Temple (1997) asks students to submit a written summary of the arguments used by each side, and Landrum (1991) requires students to submit a paper that summarizes both sides of the issue and gives evidence to support his/her own position. The students in the audience could be required to take notes during the debate (Snider & Schnurer, 2002); for example, Roy and Macchiette (2005) ask their marketing students to identify three main areas of disagreement and at least one area of agreement between the affirmative and negative sides. Including content from the debates on an exam (Huryn, 1986) or requiring the non-debating students to write multiple choice questions after each debate for the professor to use when constructing an exam (Scannapieco, 1997) are two additional ways to encourage all students to stay actively engaged.

Assessing the Debates

Consideration must be given to the criteria for assessing the debaters' performance. Some instructors give students full credit for participation alone, and others grade on a pass/fail basis to decrease the anxiety associated with an unfamiliar activity (Garrett, Schoener, & Hood, 1996). More often, teachers utilize a rubric to assess the students' performance; the rubric may be divided into such categories as analysis, evidence, organization, delivery, and teamwork. Huryn (1986) collects the students' notes, which account for

50% of their grade, so that those who struggle in oral communication skills can still obtain a good grade through preparing excellent written notes. The instructor could consider the following questions when formulating a rubric (Glantz & Gorman, 1997; Jugdev et. al, 2004; Snider & Schnurer, 2002):

- Is the student persuasive?
- Is the student well organized?
- Does the student focus on the central ideas of the debate?
- Is every statement supported by cited researched evidence?
- Is the research recent?
- Is the research complete or are there large gaps of knowledge?
- Are an adequate number of sources used?
- Is the evidence presented biased in some way?
- Does the student make frequent eye contact with the audience?
- Does the student respond to all of the opponent's points?
- Does the student challenge flaws in the opposition's arguments?
- Does the student avoid making faulty generalizations, distorting information, and oversimplifying issues?

A second consideration for assessment is whether to assess the students individually or as a team. Moeller (1985) gives his developmental psychology students both an individual and a team grade. The individual grade is based on diction, eye contact, insight into the issue, and overall effectiveness, whereas the team grade is based on their organization, preparation, use of supporting evidence, and use of rebuttal.

Third, instructors must decide who will do the assessment-- the debaters themselves, the rest of the students, the instructor only, or the instructor and students. Smith (1990) has all of his sociology students at Boston College rate the debaters according to ten different criteria, and then he averages the mean score from all the students with his score obtained using the same form. A comparison of the students' and instructor's ratings illustrated that there was a significant correlation between the instructor's and students' evaluations. Beck (1999) describes an assessment in which debaters are evaluated by the rest of the students. He asserts that requiring all students to write down and evaluate each argument used by both sides encourages active participation. Walker and Warhurst (2000) assign a group of students to assess each debate team's performance individually, and then the group of student evaluators works together to arrive at a decision on the assessments. Gibson (2004) requires each member of the audience, who will score the debate, to also submit a critique of an article on the topic to demonstrate that they have some understanding of the issue.

Regardless of who is doing the assessing or how it is done, the evaluation procedure should be explained to the students when the debates are assigned. If their use of resources will be assessed, are they required to provide a bibliography? How many sources must they use to receive full credit? Are electronic resources acceptable? Some instructors require the students to consult particular sources, often placing them on reserve in the library, because the instructor's familiarity with the sources makes it easier to judge how well the students have used the material (Moeller, 1985).

Conclusion

"Active learning fosters complex thinking processes and improves retention, assimilation, understanding, and proper application of course content" (Scannapieco, 1997, p. 955); therefore, students benefit when professors use instructional strategies that promote active engagement. In-class debates provide an opportunity for students to be actively engaged, particularly if the instructor uses a debate model that involves more than just two to four students. However, even if only four students are orally participating in the debate, the novelty of a less familiar instructional strategy can increase the students' level of interest and attention.

Debate as an active instructional strategy enhances learning particularly in the areas of mastering the content as well as developing critical thinking skills, oral communication skills, and empathy. Participation in a debate requires a more thorough mastery of the content than even giving a lecture does (Lewin & Wakefield, 1983). Yet debates go beyond mastery of the content as students also develop critical thinking skills, such as recognizing inconsistencies and identifying assumptions. The students can apply these skills in many different situations. Similarly, debates demand the development of oral communication skills, which are vital for success in most careers. Most undergraduates take only one course in oral communication; therefore, instructors in various disciplines must imbed oral communication exercises in their courses. Debates also provide opportunities for developing empathy as students give consideration to various viewpoints, particularly when instructors structure the debate in such a manner that more than two views can be presented and that students are not always defending their own viewpoint. "Debating is the ultimate multi-task school activity since it involves research, writing, speaking, listening, and teamwork"

(Allison, 2002, p. 13). Therefore, participation in debate should not be limited to those on forensics teams but should be an experience afforded students in a wide variety of university classrooms.

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International Journal of Teaching and Learning in Higher Education 2007, Volume 19, Number 2, 191-204
http://www.isetl.org/ijtlhe/ ISSN 1812-9129

A Practical and Progressive Pedagogy for Project Based Service Learning

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This article explores the use of a new teaching and learning model that incorporates diverse progressive teaching methods to create an innovative tool for educators. The Partnership For Learning Model (PFLM), was created specifically for service learning students, community partners, and faculty with a carefully choreographed series of classroom exercises This model, along with its corresponding exercises and assignments, may be applied to a wide range of professional, academic courses that will enhance student's life skills and provide real world benefits for the communities where it is used.

John Dewey (1938), the architect of American progressive education, described education as involving the full range of the students' life experiences, not just the academic experience. More simply, he believed education was a deeply, perhaps inextricably intermingled, social phenomenon that served to reinforce the aims and methods of society as a whole. A foundational principle of Dewey's was that, to effectively participate in education, a student must be able to experience education in the *context* of life. A context-rich environment would, Dewey believed, make the process both meaningful and ultimately more practical and applicable for the student. The student and society would gain in equal measure (Dewey, 1900).

Unfortunately, Dewey's philosophy appears to have been largely ignored in today's formal education settings because currently there is a clarion call throughout America that education is in crisis (Bridgeland, DiIulio, & Morison, 2006). The question of the level of meaningfulness of education is under close scrutiny from inside schools and colleges as well as from individuals outside (Bickman, 2003). Feedback from students is clear: hands on, practical application is needed more than lecture and theory **(**Astin, 1993; Levine & Cureton, 1998; Sax, Keup, Gilmartin, Stolzenberg, & Harper, 2002; Schroeder, 1993). Feedback from prospective employers is equally clear: being book smart is not enough; students need practical skills prior to graduating from college **(**Busse, 1992; Brown. & Hesketh, 2004; Coplin, 2003; NACE, 2005). Understanding theory is important, but lacking experience in a rapidly shifting global economy does not bode well when trying to get a job after graduation. Competition for jobs is fierce for new graduates; a well rounded resume, heavily laden with academic success, is just the first step for a call to interview. Real world experience that is both practical and marketable is often the difference between a job offer and a polite, "Have a good day -- good luck in your future endeavors." As a result, the all too frequent lament of students is, "How do I get experience unless I have experience?" Students know they need experience, but what experience is the right experience to be competitive, and how do they get that experience?

Conversely, employers face an equally difficult dilemma. They have the need for skilled employees who not only have technical skills but a host of practical and life skills as well, and they cannot afford the months of effort required to train a recent graduate to effectively join their workforce. Many employers have needs that require more than a traditional college education; these needs include experience with teamwork, project skills, organizational skills, communication skills, time management and an understanding of leadership and followership. Seasoned professionals use these skills with ease, an unconscious extension of their lifelong training and experience, but to neophyte graduates these skills are alien, even incomprehensible. Being "booksmart" is one thing, while demonstrating professional skills needed to perform a job is quite another. This situation may leave students and employers alike pondering the question, "Is a college education enough?" A new model combining effective teaching and learning techniques in thoughtfully designed and innovative ways may solve this riddle.

Students and their educators face a distinctly unique challenge: how does one gain practical real world experience in disciplines rich in theory, technology, and methodology? This article will examine a new progressive learning model, The Partnership For Learning Model (PFLM), designed with educators, students and employers in mind. This model seeks to bridge academic experience with real life experience, thereby making formal education more meaningful and portable. The PFLM, simply put, is a teaching approach that combines theory with direct experience. Service learning projects drive the curriculum, and once these projects are identified, all subsequent classroom learning focuses on bringing these projects to fruition. For instance, developing garden plots for a local community requires students to work together with city administrators and local organizations, such as Chambers of Commerce, in order

to bring their project to completion. Here are several active approaches to learning, rooted in Dewey's philosophy of progressive education, that are used with the PFLM:

- *Project-Based Learning*: Project-based learning is an instructional method centered on the learner. Instead of using a rigid lesson plan that directs a learner down a specific path of learning outcomes or objectives, student designed projects allow for in-depth investigation of a topic worth exploring (Harris & Katz, 2001; Katz & Chard, S. 1989).
- *Problem-Based Learning*: Students collaborate to study the issues of a problem as they strive to create viable solutions. Unlike traditional instruction, which is often conducted in lecture format, teaching in problem based learning normally occurs within small discussion groups of students facilitated by a faculty tutor (Aspy, Aspy, & Quimby, 1993; Bridges & Hallinger, 1991).
- *Applied Learning*: Applied Learning is most controversial because it is so widely defined and equally widely stylized and used. Applied learning is described as a situation in which, when provided opportunities to apply learning through projects, students actively inquire, investigate, organize and "operationalize" their ideas (Dewey, 1902). The only common thread among the dozens of applied learning definitions is that it is active application of previously learned theory (Keller, 2004).
- *Practical Skills/Life Skills Training*: Practical Skills are those which bring value to the student and the employer but are, paradoxically, seldom found as a formal point of curricula. These skills include time management, critical thinking, teamwork, leadership, followership, communications, presentation skills, and organizational skills. Virtually any skill that can be reasonably expected to have value across the life experience of the student can be an important part of curricula (Dewey, 1916).
- *Service Learning*: There are many definitions of service learning. The common denominator in all service learning is a program where service to a person or agency results in a student learning experience (National Service Learning Clearinghouse, 2004).
- *Authentic Learning:* Instruction is based as much as possible on “the real world.” Learners work with rich, complex cases and engage in meaningful, functional tasks. Instruction that is not authentic often oversimplifies; such oversimplification impedes the development of useful representations of knowledge and makes transfer, or the ability to use knowledge in new situations, difficult (Anderson & Armbruster, 1990).
- *Action Orientation*: Learners must be active participants in their learning, not passive recipients of information. Learning and acting must be intimately related; therefore, throughout training, novices must attempt to perform authentic tasks. They must repeatedly perform as expected of expert practitioners (Anderson & Armbruster, 1990).

The PFLM uses all of these progressive practices because they help integrate academic, emotional, professional, and life skills; however, project based learning is the centerpiece of PFLM. Project-based learning is not new; it is known to have been used for many centuries, and its widespread use is documented as early as 1590 in architectural schools throughout Europe (Knoll, 1997). By 1765, project learning was transplanted as a regular teaching method to America and remained in widespread use in public schools until 1915. Dewey’s theories placed great value on the project method, meaningful active experience that he foresaw as an ideal partnership between student and teacher that could be conducted for the good of, and in the context of, society itself (Dewey, 1900).

What It Is and How It Works

PFLM is a new model that is consistent with the educational philosophy of John Dewey and that also addresses new educational challenges that did not exist within Dewey’s lifetime. Students and educators in the 21st century are challenged by evolving employer needs, needs that require diverse, real experience. As a new model it combines proven techniques in new and innovative ways. As a holistic teaching and learning model, PFLM is built on three assumptions:

- Students must be prepared to learn; they must participate in the preparation of their learning environment in order to excel.
- For education to be meaningful it must have connection with other parts of the students’ life experience; without that connection knowledge becomes an isolated artifact of the educational experience.
- Students have a limited understanding of the relationship between theory and practice unless they apply theory, reflect, and then

apply their learning to future experiences; a "lived" understanding is needed for a complete learning experience.

To fully grasp the importance of the three assumptions, it is worthwhile to examine each a little more closely. The following paragraphs briefly explore these assumptions:

Preparation is crucial: by building a learning environment together the student-educator partnership is jumpstarted. By encouraging, even requiring, students to physically and psychologically participate in the rules and goals setting, students become participants in education, not just recipients. Simple steps such as room layout, project choices/input, choice of role playing roles, and mutually establishing routines become invaluable points of collaboration.

Meaning is derived from how the student may benefit from the lesson. Once students realize the role of the educator is not to teach them *things* but to open doors for them to explore and discover, students quickly become invested in the learning process. Educators understand the content but must also accommodate *context*: finding universal context (e.g., life skills, authentic experience, personal insight) is often the key to meaningful content.

Relationships pervade life: whether professional or social, human relationships are the norm. Too often, academic experiences are linear – programmed experiences that methodically build upon each other to a predetermined goal. Unfortunately, the ability to take notes, study, and pass a test does not mean a student can apply the theory, learn, reflect, and perform better in successive applications. Practical meaningful application followed by reflection can unlock the door to a student gaining a better understanding of how skills, actions, and responsibilities interact, counteract, and enhance each other. Understanding these relationships can yield a permanent educational experience that transcends the impact of earning an "A" on an exam.

To understand this structured and incremental partnership model it is perhaps most useful to view PFLM through the eyes of a typical class with topics and activities for each class session. Because the first session is critically foundational and preparatory, it is important to describe it in some depth.

The first class session consists of two steps: identifying interests, skills, and goals, and identifying a team project. The first step consists of a series of very short activities in which students anonymously identify their interests, skills, and goals on separate index cards. These cards are then collected and distributed back to the class, ensuring that no student receives his or her original cards. Students then compile three separate lists (interests, skills, goals) on the board; the instructor facilitates this by asking strategically placed questions as the lists are being built on the board (e.g., what types of skills do you think it takes to be a really good video game player?). The class is then broken into small teams of four and completes a problem solving exercise in which each group connects the dots between the lists, identifying which skills support which interests, which interests support which goals, and which skills support which goals. The activities take less than thirty minutes, but they set the stage in several crucial ways:

- As an anonymous activity no student, or his or her input, is perceived to be singled out for either praise or ridicule by his or her peers (or the instructor).
- Students frequently find that they have the same interests, skills and goals (or perceived lack of interests, skills or goals) as their peers.
- They discover a connection, frequently for the first time, between their interests and "real world" skills (e.g., video game playing requires problem solving, hand-eye coordination, and strategic thinking skills).
- They discover that, as a class, they have a large and diverse skill set available.
- Individually and collectively they invoke Dewey's Pattern of Inquiry (1938, pp. 101-119) which includes identifying the problem, establishing a plan, testing the plan, and reflecting on results for the first time in a structured manner.
- The first piece of team activity has been completed in a non-threatening way.

At this point the students are given the opportunity to choose their project from a list of real world, pre-screened projects. While the pre-screening ensures that the projects are appropriate (significant, possible within the amount of time allotted, connected with a reputable agency) pre-screening also ensures that project completion is not possible by a single student, but is only possible with teamwork. This not only reflects the nature of professional projects in the "real world" but serves as a vehicle for many of the team building activities during the course.

Typically, there are many more choices of projects than there are students to work on them, and a general rule of thumb is 3-4 students per project. Students choose their project (choice is a very powerful motivator and investment strategy) and are required to negotiate with each other for projects *as a class* if any project is under- or over-staffed. Past projects include city-wide childcare availability assessments, historic preservation and re-use, updating city land use surveys

and maps, planning city-wide holiday events, and more. Any project that can be completed within the available time and with the available resources can be considered. Non-profit organizations are good project sources: they have much need and few resources.

The amount of information the students are given also reflects the nature of project work in the "real world": a short paragraph with a brief description is all that is provided. It is typical in the real world that organizations have a "big picture" vision, frequently vague or under articulated, of what they would like to accomplish, but typically they have little actual detail to plan or execute a project. Though students normally have many questions at this point they must commit to a project without any additional information. Though this may seem arbitrary, this serves to segue to the final activity of the first class session.

The instructor briefly explains the roles of the project players; the organization that is the project source is the *customer*, the course instructor is the *manager*, and the students are *consultant project teams*. The manager serves as facilitator, mentor, safety net, and sounding board; the customer is never the supervisor of the project or the team. The project teams are managed by the manager, and they plan and execute all facets of the project under the guidance and supervision of the manager. The teams are *responsible* for delivering an acceptable product to the customer but are *accountable* to the manager for all actions necessary to deliver the product. All work from this point forward is undertaken within this framework.

Students form their project teams at this stage; while there are large group (class) activities throughout the remainder of the course, much of the activities and dynamics center on small group (team) work from this point forward. Students are told that initial meetings with their real world customers will be conducted the next week and that they will need to obtain additional information from their customers at these meetings. At this time, through a short class-wide exercise, students are introduced to critical analysis.

Critical analysis as presented in this venue is not a generic mindset but a specific, concise methodology. As conceived by Wurdinger (1997), critical analysis is an easy to learn three-step process by which a person identifies an *assertion* in a situation, identifies the implicit and explicit *assumptions*, and derives *questions* that explore the assumptions. This process of identifying and clarifying is an easy means of understanding a situation and some of its implications. In a project setting, students use this process to build key insightful questions and begin to strategize about what information they really hope to gain from their customers. To maintain focus and prevent students from feeling overwhelmed, students are limited to building four key questions.

Once again Dewey's Pattern of Inquiry is invoked: students identify their problem by determining what the customer really thinks they want, developing a plan, testing the plan by identifying assumptions and key questions, and reflecting on whether what they have determined provides a clear path to interact with the customer. The instructor's role at this point is to ask descriptive (or even leading) questions rather than providing prescriptive answers. The final task for the individual teams during this first class session is determining the details of how they will communicate with each other and with their "manager" (the instructor). The instructor closes the session by facilitating a very brief report-out in which each team shares their key questions and their communication protocol. The teams are assigned homework (reflection/initial thoughts on how to tackle the project) and the instructor describes acceptable business apparel for the meetings. The instructor also coordinates the customer meetings and replies to each individual team with dates and times.

Meetings with the customers are typically scheduled twice in the first month and then once a month for the remainder of the project, though students negotiate with the customer on communication protocols (e.g., weekly by e-mail, twice a month by memo) based on the comfort level of the customer. All communication (written, spoken) is coordinated with and through the instructor; this ensures that the respective roles are observed by all involved. Communication between the instructor and the customer is more frequent: a weekly telephone call or visit serves to assess satisfaction with the project status or to manage the comfort level of a high maintenance customer. This small investment in time also sets the stage for future project opportunities.

At the end of the first class session several key concepts have been introduced and used in a practical manner by the students: problem solving, critical analysis, pattern of inquiry, self assessment, and communication within a small group. Additionally, the first step in project based learning has been successfully navigated: the project has been identified.

While the first session differs from successive sessions in that it is mainly preparatory in nature, this same pattern is repeated in each successive class session: activities and exercises are used to introduce key concepts that the teams then use in the context of their project. The instructor acts as facilitator and mentor; he/she does not approve a project plan or scope of work but instead asks questions to help students focus their thoughts and efforts. Since there is no predetermined project result, students experience the reality that initial plans frequently fall short of the final vision and that all plans are best viewed as living processes that evolve. They learn as a result of the

effect of their mistakes and how their process contributed to the mistakes.

Problem solving with these authentic projects continuously occurs within the framework of the project: role playing and other active approaches to learning mentioned earlier are not only geared towards technical performance but also organization, planning, leadership, management, ethics, accountability, time management, and communications styles and strategies. In every case the reflection/report-out of the individual and the project team doubles back to a key question, "How can you apply this to your project?" Very typically, by the third week of class students make this connection without prompting and become adept at articulating their new discoveries.

While project troubleshooting does occur in class, the bulk of project work occurs as homework. Updated project plans are e-mailed to the instructor at a scheduled time each week; this gives the students flexibility to work and adjust their plans as requirements change but keeps the instructor in the loop. Each class session the teams provide brief five-minute status reports on their projects to the class as a whole; this provides a myriad of benefits:

- Allows students to identify needs and concerns and share critical expertise between teams.
- Allows students to share best practices with their peers and experience networking.
- Allows students to gradually build confidence in professional public speaking.
- Ensures forward momentum both individually and collectively.
- Allows the instructor to spot a project that is in trouble early in the process.

As students become comfortable with their process and project they also incorporate expertise from their academic discipline into their project work, connecting the dots spontaneously. Concepts are continuously introduced or revisited across the life of the class to facilitate the project completion but, more importantly, to reinforce the experience as a whole.

Here is a project example that may help readers better understand how the process unfolds during a semester-long course. As a project, one team of students chose to research and develop an informational brochure on obesity reduction for the United Way. The team consisted of four students: a mixture of undergraduate and graduate students, men and women in an age range of 19-27. The customers' vision was to produce an informational brochure that, at the time, did not have a definite community audience. Through the critical analysis exercises noted above, the project team prepared for their initial customer meeting by determining their four key questions:

- What is the self perceived/assessed role of United Way in obesity reduction?
- Are there community partners that United Way desires to work with on this issue?
- Are there constraints (time, budget, resources, politics, etc) that United Way can identify that impact this project?
- Is there an existing United Way process that must interact with the project processes?

Based on these questions the team was able to help the customer group focus their vision. This helped the customer determine needs versus desires (simple prioritization), the constraints, and the realization that the project process would need to mesh with an existing county-wide committee process. The result of the initial meeting provided three immediate benefits:

- The customer had a clearer vision of their actual needs, desires and constraints.
- The students had clearer details to determine what was possible within their allotted time.
- Feedback from the customer was so positive that it boosted the project team confidence.

Based on this information the team used new concepts presented to build a scope of work document, a brief document that outlines what is and is not part of the project, specifically what will and won't be delivered, a timeline for completion, and points of contact. This scope of work document was then presented to the customer for negotiation/approval at the next meeting and became the project agreement and the learning contract. Once armed with this approval the students used new concepts presented in the previous class (basic project planning) and prepared a project plan that included detailed tasks, assignments, timelines, fallbacks and specific deliverables. By the third week of class the team had learned and successfully applied scope of work essentials, basic project planning, critical analysis, fundamentals of negotiating in a professional environment, communications strategies, expectations of business dress and demeanor, basic team organization, and the basics of customer expectation management.

In the following weeks concepts introduced and applied included time management, ethics, change management, accountability, fundamentals of committee work, leadership, professional corporate writing, presentation skills, and grace under fire (the

ability to perform confidently and professionally when things go wrong). Each step of the way the team built confidence in themselves and their abilities and used the instructor increasingly as a mentor – the senior member of the firm who helped them balance their perspective – and less as a source of determining what's correct or incorrect. United Way first accepted the team as subordinates and then eagerly embraced the team as partners through every part of the process. As the committee work progressed, the team also discovered ways to balance the frustrations of committee work with gleaning the tiny golden nuggets of vision and innovation that committees frequently generate but often overlook. New communications skills became vital as students struggled with, and then overcame, a wide variety of leadership styles within the county-wide committee.

New skills, such as expectation and time management and scope of work discipline, became the student's "best friends" as the committee, impressed by the quality of work, pressed for even more products of even greater impact. Teamwork, communication, and leadership became highly polished as the students performed and kept not only themselves but the United Way committee on track, on pace, and on vision. The final product far exceeded the initial vision United Way had originally crafted. The students planned and executed a project that produced, in the words of the United Way, a *series* of well researched, elegant, professionally designed color brochures that targeted schools, workplaces, and health care facilities with meaningful information. The brochures, each with different content and a message deliberately aimed at its target audience, moved the vision from that of a handout available upon request to an initiative that would place focused informational resources in every school, healthcare facility, and business in the metropolitan area. As a result the United Way changed its plan from that of maintaining a brochure for distribution on request to generating 10,000 copies for proactive outreach across the length and breadth of the city. The United Way also included the names of each student on the team in its reporting and advertising, as attribution for professional accomplishment.

However, the final product for the students was not the brochures, but a formal presentation for their peers, family, and friends that showcased their products, their insights, their lessons learned, and their coming of age as working professionals.

PFLM uses a different pedagogy that employs diverse methods that partner with each other. A cornerstone is the extensive use of small groups: much of a graduate's professional career will be spent in team-based activities, and PFLM reinforces that reality. A second cornerstone of PFLM is that effective learning cannot separate content from context. To that end, practical skills and the real nature of actual community based projects are partnered at every juncture. Figure 1 illustrates the learning partnerships and interactions within PFLM.

Unlike traditional models where content is delivered and understanding assessed through quizzes and tests in a linear and segmented nature, students perform in learning situations that have applicability beyond the classroom. The student as an individual and a member of a team, along with the instructor, solve problems and apply new skills. Actions, reactions, learning, exercises, discussions, assignments, and experiences are done in a continuum that is constantly both new and self reinforcing. Simple, free, and readily available exercises may be found in Appendix A. These exercises are combined with real community needs and students needs to provide a dynamic and fast paced, but exciting, learning experience for students, agencies organizations, and faculty. While many of the homework assignments found in Appendix B focus on actual project work, some assignments are scheduled to prepare for the project work or track and communicate the project status. In every instance the homework is preparatory for the exercises in the next class session. A final project report and a final presentation are assignments beyond the completion of the project itself.

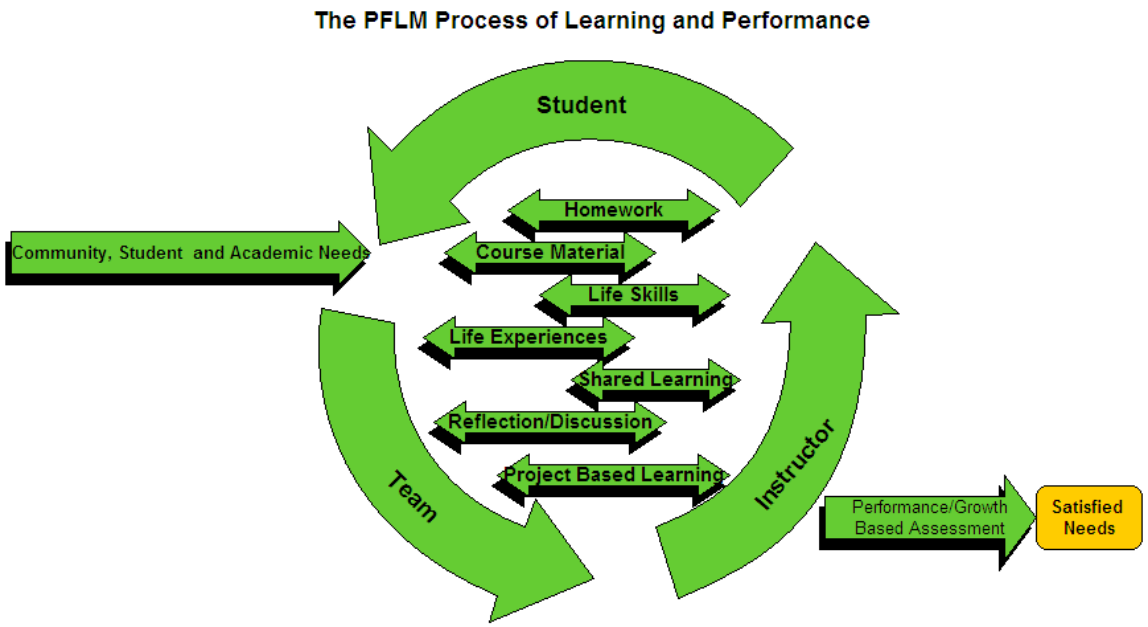
Understanding the Partnership Aspect of PFLM

Partnership is a key component of PFLM in many forms. Teaching methods are partnered for best effect; students are partnered for the most diverse, robust, and realistic experience; and community and faculty are partnered with students and each other in innovative ways. This layered partnership approach brings great depth, flexibility, and value to the learning experience.

The roles of the community partners are designed to highlight the strengths of each while minimizing their inherent weaknesses. Local governments and non-profits are the sources of projects; these agencies "outsource" real world projects to the University. This is an attractive proposition because many agencies cannot complete projects due to political, expertise, time, resource, or funding constraints. The role of the agency as customer, not the supervisor, effectively relieves these agencies from the burden of intern supervision. Because multiple students work together, larger projects can be tackled; this opens the door for agencies to think in bigger and more important terms than in either internships or typical service learning.

Students from various disciplines form the teams for this project work, and all interaction with the customer is supervised by the instructor. The instructor provides a consistent level of supervision, expectation,

FIGURE 1
Learning and Performance in PFLM



and guidance, ensuring that the spirit and goal of the learning environment is maintained at all times. Students, in the role of consultants, meet with their customer to determine needs, collect data, and provide updates and status reports. Students also build project plans, set milestones, and conduct research to meet customer needs, all with instructor reinforcement that focuses on expected student performance as professional employees. The PFLM faculty role is critical yet manifestly different from that in traditional education. The instructor guides the student experience, ensuring a reality-based context is followed and supported by technical knowledge and experience; this experience is interwoven with practical skills instruction and experience. The instructor acts as facilitator and mentor, helping the student connect the dots on the holistic canvas. The instructor choreographs exercises, discussions, role play, and assessment across the spectrum of the student experience. The big project helps build a curriculum that includes multiple smaller projects, a typical experience in real life, incorporating numerous details and concepts to which a student must attend. Students participate simultaneously in the processes of learning and learning how to learn, and are able to begin to self assess and critically explore their interests, goals, and needs.

An interesting side effect of PFLM is that students and customers bond in a professional sense, and each interacts with the other to create the best possible product while understanding the unique perspectives of the other. Agencies gain not only a deeper appreciation for the students but build stronger, multifaceted, ties to the university as a result of the service provided. PFLM has proven itself to be a learning strategy that is centered on the student and the material: reality based content is centered on the student's interest and community experiences, interaction, and growth. The result is an emotionally satisfying experience for students, agencies, and faculty.

Initial Results and Final Thoughts

Of the initial test classes in which PFLM was used, 45 students participated in a formative survey describing their experiences and designed to provide some initial feedback on the efficacy of the PFLM. The survey included background information including gender and class level but did not include student identities. Questions included student feedback on applicability of the course; perception and rating of skills learned; comparison to other courses that involved service learning, internships and/or practicum; and student self assessment of personal growth in areas such as confidence, team and leadership skills, and desire to become involved in the community. Representative verbatim feedback from students included the following:

- "I think I learn more in this environment, it's because learning happens naturally – not in some sort of planned out structured environment. I have gained multiple experiences that have taught me quite a few things…experience stays with you longer than any sort of class lecture."
- "I would take this class again because of the practical application of the skills we learned. It gave me a great opportunity to see how committees really work and apply my education to the real world. So much of college is just book learning, it is nice to be able to apply that knowledge."
- "I would take this course again for the pragmatic experience, getting your hands dirty. Rarely will courses put students in a learning situation doing practical business cultural analysis through actual projects" (Hugg, 2005).

Over 97% of students who completed PFLM courses stated they wished to take another PFLM course. Student feedback overwhelmingly rates the mentorship and life skills aspects as highly as the community based project work; students find the process energizing, rewarding, and even intriguing. Sample verbatim comments from the surveys included the following:

- "I would take this class again because it give [sic] you really good experience for a future job. This class really was more of a part-time job that that of a normal class. As for the learning, I believe I got more from this than any text book could have given me."
- "I really enjoyed this class. It is the best course I have EVER taken. Courses and text books can never teach students how to interact with people, make decisions, and produce a project that numerous people will benefit from" (Hugg, 2005).

In course feedback, many students who experienced PFLM expressed a desire to continue working on community projects. Additionally, several students expressed an interest in graduate-level education directly as a result of their experiences with their undergraduate PFLM work. Verbatim comments from the survey included the following:

- "I would take this class again because it gives me real group work and working for a customer experience that is essential to know how to do in the real working world."
- "Working on a project that makes a difference in the community is also another reason that I decided to take this class again."
- "I will take this class again as a grad student but I will try something totally different, i.e. no non-profits (projects) (Hugg, 2005).

Perhaps most importantly, many students articulated that they now see their education as a continuing process, not a goal unto itself.

In addition, feedback from students who completed both internships and PFLM courses found that, in 87% of the cases, their PFLM experience was more meaningful than their internship experience. These students stated that they perceived their internships to be limited in scope and importance, whereas their PFLM experiences were perceived as significant contributions to the community, a sentiment shared by community agencies in separate feedback. Sample comments from the survey in this area included the following:

- "Great experience to get involved in the community and have guidance and mentorship in doing so."
- "The students and faculty have been a pleasure to deal with. They are quite professional and produce a quality product. I am pleased to see the university reaching out to the community in this manner."
- "We believe the [products developed] will be very beneficial to the city in assisting us in our goal of growth and development" (Hugg, 2005).

It was also discovered that students in 15 courses with different academic disciplines, ranging from sophomores to final semester graduate students, outpaced course expectations (Hugg, 2005). Their interest level, performance, professionalism, and confidence increased dramatically with each successive milestone and exercise. Simply put, it is meaningful because they contribute in a real way and find rewards in the process, not just the results. With instructor mentorship they also gain valuable perspectives that fuel their curiosity and confidence. Student feedback indicates they highly value the mentorship provided by instructors and are invested in the process; they experience ownership and collaboration and share the responsibility for their educational experience.

Though this model has only been used for a few semesters, the initial results are encouraging. Local agencies and communities are genuinely pleased with the results, and the university now has a long waiting

list of diverse projects generated from many community agencies. As word spreads, agencies are eager to partner with the university and are thinking outside the traditional internship or service learning boxes and more about larger and more significant community needs. Communities have also demonstrated the desire to recognize students' work; a typical response at the end of a project is either a letter of appreciation by name to the students or publishing the final product with professional attribution to the students.

Faculty members find PFLM interesting and thought-provoking; it has proven to be an ideal platform for intra-departmental and inter-departmental collaboration. Several more faculty members are either rewriting their existing curricula using PFLM philosophy or incorporating individual elements into their courses. Many of these faculty members have stated they have discovered and seized research and writing opportunities as a result of their PFLM experiences, a facet that promotes professional development as well as intellectual curiosity.

PFLM is not a silver bullet; it is simply an innovative tool for educators to consider. It is based both on century's old proven methodology and built on 21st century research to reflect the changing needs of communities, educators, and students. At its core, it is the best practice of educators partnered with a new way of organizing both thought and effort. It is not designed to replace internships but is, perhaps, well-suited as a capstone experience to launch a graduating student into the professional world.

The challenges students face in a PFLM based course are complex and diverse, and they mirror what it would be like to be employed in a professional setting. By facing and solving real world problems using basic project management, team building, and leadership skills, students operationalize concepts and see tangible results. By using strategic thinking skills such as critical analysis, students not only learn how to structure their thought processes but see the actual connections between their processes and the results in real time. By experiencing the complexities of communication in a live project setting, students not only learn the subtleties, strengths, and pitfalls that come with interpersonal communication, but they experience the techniques necessary to keep a team focused, productive, and cohesive. Advanced thinking skills such as learning to be a critical evaluator and designing a scope of work document let the student see, experience, and reflect on the value of strategic thought integrated with a deliberate process. In every instance the student is challenged by new situations, requiring continuous analysis and reflection. In the end, students earn not only new skills but new perspectives and confidence in their new abilities. PFLM's broad range of experiences, skills, and challenges seem superbly structured to allow a student to walk from college to the professional world amply armed, eager, and confident.

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Appendix A
Sample Exercises and Activities Used In PFLM

Exercise/Activity	Week(s)	Outcome Focus
Fear in a Hat Anonymous activity in which students identify their greatest fear about their first post-graduation job.	1,10	Builds common ground in a safe manner; identifies individual and group challenges for project.
Interviews Short mock interviews in which students interview for their project team. Instructor is the interviewer and focuses on project choice and friendly interview outcome.	1,12	Builds common ground in a safe manner; establishes workplace tone; jumpstarts reflection on communication styles and the value of preparation.
Skills & Interests Inventory Anonymous activity where students identify their best skills and interests. Emphasis on drawing out skills not easily recognizable by students (e.g. attention to detail is crucial in video game playing).	1,13	Builds common ground in a safe manner; identifies individual and group skill set; identifies diverse skills (used to pursue interests) that are easily transferable to the workplace.
Goal Setting Students identify their # 1 goal for the class, then the individual lists are combined into a group list. Group list is negotiated – narrowed down to include the most common goals while including the most meaningful individual goals.	1	Builds common ground in a safe manner; identifies individual and group goals; establishes common group ground while maintaining individual perceptions and goals.
Connect The Dots Students connect the dots between group skill set, group interests list, group goal list and group fears list. Involves basic problem solving that requires insight and creativity as well as concurrent free flowing discussion.	1,13	Builds common ground in a safe manner; identifies individual and group skills as compared to challenges (fears) that need to be overcome; highlights the depth of existing skills. Shows how group/individual goals can be met through collaboration.
Critical Analysis Introduction to critical analysis as an active, consistent technique through small group activity using list of project choice descriptions provided by instructor.	1,2,8	Facilitates examination of projects and project choice; focuses students on gaps in information and sets the stage for initial conversation with customer; sets the stage for scope of work exercise; enhances communication between students.
Project Choice Students rank their top 3 project choices and form project teams based on choice and project resource needs. Teams reflect and give feedback on why project was chosen. Teams decide project communication protocols.	1	Project selection and project team formation; small and large group reflection/sharing of project choice and individual goals; Teams decide how they will communicate with each other and the instructor; Team selects/elects a project manager.
Short Customer Meeting Students meet with their customer (project owner) in a formal meeting to determine customer actual needs and/or communicate project status. Followed by discussion and reflection with instructor.	2,9,13	Students meet customer and project becomes "real"; effect of professional attire, communication and behavior; highlights value of critical analysis as a preparatory technique, students gather information to build a scope of work and a project plan.
Scope of Work Based on customer meeting, project teams build a scope of work. *This may be drafted during the customer meeting as part of project negotiation.*	2	Project teams work through, and commit to, the parameters of the project; basic problem-solving; sets the stage for the project planning exercise.
Basic Project Planning Hands on introduction of project planning basics; teams build draft project plans concurrent with	2	Enhanced problem solving, communication and goal setting; determines action steps; also includes introduction to time management and

instructor introduction of basics. *Instructor facilitates and mentors.*		task identification and scheduling.
6 Hats Thinking Focused thinking technique for team building and team communication. Highly effective means of quickly gathering multiple perspectives in a friendly, reflective and inclusive manner.	2	Increases planning & work efficiency, communication and "open-minded" leadership; increases value of individual perspectives in a team; prompts students to cover all the bases and consider options otherwise easily overlooked.
Project Status Report (Initial) Teams present a detailed overview of project status and immediate goals to entire class. Emphasis is on instructor mentorship and facilitation as well as best practices/lessons learned sharing between/among teams.	3	Scope of work and project plan delivered as part of initial status report; class-wide discussion and reflection of plan parameters is facilitated by instructor; introduction to the basics of formal presentations; the scope of work and project plan become the formalized learning contract
Spy Story An interrelated set of 10 puzzles designed to explore and examine team organization, task delegation, trust, and communication.	4	Impossible to complete without team work within the allotted time; provides immediate tangible lessons on organization and communication.
Project Status Report (Recurring) Teams present a 5-minute overview of project status and immediate goals to entire class. Each team rotates status reporting among its members.	4-7,9-13	Helps instructor ensure team stays on track; helps ensure team members are adequately communicating with each other; helps teams glean lessons learned from each other.
The Professional Jonah Teams evaluate each others' project plans using critical analysis and Six Hats thinking (includes introduction to groupthink).	4	Understanding the need for, and role of, the Jonah (group critical evaluator); reinforces previous learning in a safe environment; provides insightful peer feedback to plans; helps prevent groupthink.
Communications Styles Exploration of leadership and management personalities and effective communications styles through role playing. Project status is used as the vehicle for role-playing.	5	Students learn how to effectively manage expectations when faced with a variety of management and communications styles; enhances awareness of preparation and self confidence as well as poise.
The Art of Staff Meetings Introduction to planning and leading a staff meeting followed by role playing in which students plan and lead short staff meetings using different leadership styles.	6	Awareness of the effect of different leadership/communications styles on productivity; reinforces previous learning and value of preparedness; reflection/ sharing effects of styles used.
Leadership and Supervision Role playing in which the instructor plays various workers who participate in a project to varying degrees. Students are the immediate or upper level supervisor required to keep the project on track.	7	Introduction to the challenges and ethics of supervision; reinforces earlier communications, goals, skills and negotiation learning; safe, yet highly self- reflective exercise in which students may inwardly examine their project team roles and performance.
The Formal Staff Meeting A formal staff meeting in which each team must present a detailed briefing to the instructor and class. Emphasis is on coherency, professional attire and behavior, and, if necessary, articulating corrective actions planned to put project on track. *Followed by discussion on change management.*	8	Professional behavior under stress; the value of preparedness and effective team communications; reinforces critical analysis and Six Hats thinking to determine if project work so far and preparation for staff meeting was adequate; reinforces expectation management role playing; allows teams to adjust plan to meet scope.
Professional Writing I Using critical analysis, teams examine professional writing samples provided by the instructor. Followed by an exercise where teams	9	Introduction to professional writing (vs. other writing styles); the value and necessity of peer review; use of critical analysis on one's own writing; the effect of well written business

divide topic areas of their project, and each team member writes a paragraph on a topic area. These paragraphs are then peer reviewed.		documents; the effect of poorly written business documents; sets the stage for teams to begin drafting their final project report.
Professional Writing II Instructor-mentored exercise in which teams build a plan for their report and begin drafting the report itself. Students draft a report that describes the customer need, project, and project results.	10	Explores the commonly accepted writing format and style of the business and professional world; reinforces collaboration, critical analysis, Six Hats thinking and business ethics from readings and discussions.
Presentations 101 Introduction, role playing and peer feedback on formal presentations. Emphasis is on presentation formats and skills and techniques used.	11	Familiarity with common presentation formats including PowerPoint; reinforces value of preparation, communications styles, self-confidence, problem-solving.

Appendix B
Sample Assignments Used In PFLM

Assignment	Week	Notes
Draft Scope of Work Document	2	May be completed in class.
Project Plan and Scope of Work	3	Delivered at first Project Status Report.
Weekly Project Plan Updates	4-13	E-mailed to instructor each week.
Personal Growth Journal	2-14	Each student maintains a journal.
Communications Styles Readings Complete handout readings as preparation for in class exercises.	5	Handouts provided by instructor.
The Art of Staff Meetings Complete handout readings as preparation for in class exercises.	6	Handouts provided by instructor.
Leadership and Supervision Complete online readings as preparation for in class exercises.	4-7,10	Selected online resources by credible authors on leadership techniques.
Professional Writing I Critique Each student finds a professional writing example and uses one or more techniques learned in class to explore the effectiveness of the example.	9	Used in conjunction with instructor provided examples in the professional writing exercises.
Presentation 101 Readings	3,11	Selected online resources by credible authors on presentation techniques.
Formal Presentations A final assignment and an exercise; teams share their personal insights into their project, process, and lessons learned, as well as what they learned about themselves during the process.	14, 15	Increases confidence and comfort level of presenting before a group; opportunity to “tell their story”; significant piece of course closure process.