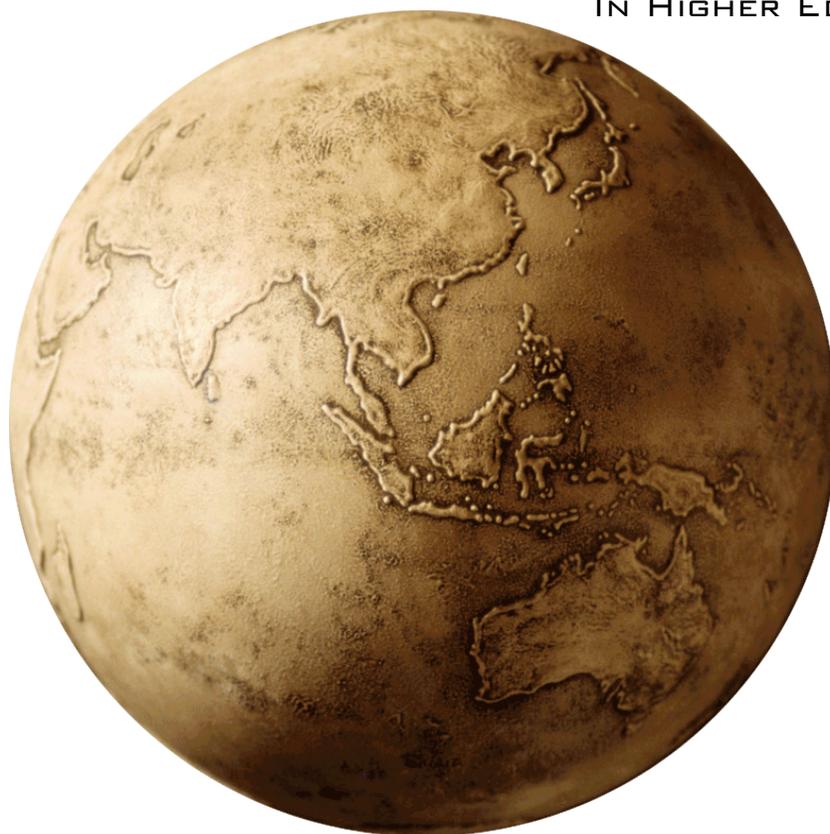


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Purpose

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

Submissions

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

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

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Supplemental Instruction: Whom Does it Serve?

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Lund University

Supplemental Instruction (SI) is today a well-known academic assistance program that provides help for students in “difficult” courses. SI has repeatedly been shown to decrease the percentage of failures in the course as well as increasing course grades for students who attended SI sessions. Although SI is open for all students, its main objective is to come to terms with students’ high failure rates and retention problems. And even if SI has been shown to reduce failure rates and increase re-enrollment figures, surprisingly few studies have been devoted to determine how well it benefits students with different prior academic ability. These studies tend to show that “weaker” students benefit from SI. The results for “average” and “strong” students are not as clear. The present study focuses on the benefit of SI for “weak”, “average,” and “strong” first-year engineering students in a calculus course. The results show that all three groups benefit from SI and that the failure rates among students with low prior mathematics achievement who had high SI attendance are almost as low as for students with high prior mathematics achievement who do not attend SI.

Introduction

Supplemental Instruction (SI) was developed in 1973 at the University of Missouri in Kansas City to increase student success in “difficult” courses (Hurley, Jacobs, & Gilbert, 2006). SI as a concept has since spread widely and is used at more than 1500 university colleges and universities in nearly 30 countries (Martin 2008).

What then is SI? First and foremost, it is not just a method but an attitude to learning in which inner motivation and curiosity are the driving forces and the main emphasis is on self-governing and collective learning (Olstedt, 2005). SI is a complement to the regular education in a course. The idea behind SI is that learning a subject is enhanced by an exchange of thoughts and ideas among students. At the School of Engineering (LTH), Lund University, Lund, Sweden, the SI program is connected to an initial, “difficult” course for first-year students in most engineering programs. SI takes place in sessions of some 5-15 students where the discussion is guided by a 2nd- or 3rd-year student. This upper-level student should not act as a teacher, but rather, he or she should help in clarifying difficult questions within the subject: the method is by asking questions, initiating work in small groups, and coordinating presentations of conclusions. The upper-level student receives training in how to be an SI leader, and gets tools to use during his/her SI sessions.

Supplemental Instruction has the advantage of not being a remedial program: it is available for everyone in a course that has an SI program attached to it (Blanc, DeBuhr, & Martin, 1983; Arendale, 2002; Zaritsky & Toce, 2006). Participating students improve their grades and reduce the number of failed exams (Arendale, 2001; Blanc et al., 1983; Blat, Myers, Nunnally, & Tolley, 2001; Bruzell-Nilsson & Bryngfors, 1996; Burmeister, Kenney, & Nice, 1996; Congos & Schoeps, 1993; Hensen & Shelley, 2003; Malm, Bryngfors, &

Mörner, 2010; Rye, Wallace & Bidgood, 1993; Ogden, Thompson, Russell, & Simons, 2003; Packham & Miller, 2000; Power & Dunphy, 2010; Ramirez, 1997; Sawyer, Sylvestre, Girard, & Snow, 1996; Webster & Hooper, 1998; Wright, Wright, & Lamb, 2002). But to what extent does SI help students with low, average and high prior academic achievement in a course? A few studies have been made. Arendale (2001) divided 1628 students attending 19 courses at the University of Missouri, Kansas City, during the fall semester 1989 and spring semester 1990 into three groups depending on their prior academic achievement as measured by the mean composite score on a college entrance exam. He found that in all groups (i.e., the groups with “weak”, “average,” and “strong” prior academic achievement) SI attendees had significantly better final course grades. In a statistics course at the University of Queensland, Australia, Miller, Oldfield, and Bulmer (2004) found an improvement in course grades for PASS-participants (PASS is the Australian equivalent of SI) independent of which group they belonged to: high, average, or low university entrance scores. Kenney and Kallison (1994, p. 80) found that “exposure to SI techniques appeared to help the lower-ability students disproportionately more than the higher-ability students” in a calculus course for business students. Likewise, McCarthy, Smuts, and Cosser (1997) in a study of SI attached to an engineering course at the University of Witwatersrand, South Africa, found significantly higher grades for SI attendees only in the group with the lowest academic ability. For students with higher academic ability no significant differences in course results were found between SI attendees and non-attendees. Murray (2006) reported a clear improvement for students attending SI on the final assessment grade in an engineering course at Queensland University of Technology in Australia independent of their high school rank. However, comparatively better results were found for students with worse rankings.

From the studies above, one can conclude that “weak” students seem to benefit from SI. To what extent “average” or “strong” students improve by attending SI is, however, less clear. The following is a study of SI in a Swedish engineering education context with a course in introductory calculus as the main focus. The main research question was the following:

How beneficial is SI in mathematics for “weak”, “average,” and “strong” students? Besides accounting for differences in previous ability in mathematics between SI attendees and non-attendees, the investigation also addresses differences in motivation/attitude and study technique/learning strategies.

The Introductory Calculus Course and the Attached SI Program

The introductory calculus course – Calculus in One Variable – is compulsory for all engineering education programs at the School of Engineering (LTH) at Lund University, Sweden (similar calculus courses are common for engineering education programs throughout the world). It is worth 15 ECTS (European Credit Transfer System) credits and constitutes a quarter of the full academic year workload of 60 ECTS credits, thus a rather large course. There are two versions of the course – one faster, that runs over one semester, and one slower, that runs over 1.5 semesters. In the present study, results from eight engineering programs with SI in the calculus course have been included: four programs with the faster version and four programs with the slower version.

The academic year at LTH is divided into four quarters (an autumn and a spring semester with two quarters each). Each quarter consists of seven weeks of scheduled classes and one week of exams. A full workload for a student is usually to take two courses each quarter. The SI program at LTH is usually attached to compulsory courses with comparatively high failure rates during the first two quarters in the first year. For the eight engineering programs considered in the present study, all have SI attached to the Calculus in One Variable course for the first two quarters. In each quarter two-hour SI sessions are offered once a week to each student during weeks two to seven (thus the maximum number of SI sessions a student can attend is six for each quarter). For the academic year 2009/10’ from which data for this study were collected, there were in total 648 students participating in the course from the eight engineering education programs. Twenty-seven SI leaders were employed in order to arrive at reasonably- sized groups in the SI sessions (in the order of 10 students at a 40 % attendance rate, which on the average had been the case the previous year). The SI leaders were chosen mainly

from sophomore or junior-year students. All SI leaders participated in a 1.5-day training course prior to starting their work.

How does a typical SI session in calculus at LTH look like? First of all it is a scheduled 2-hour session during normal school hours when the students are free from other educational activities. It is generally commenced in a relatively easy-going fashion with some 5- to 10-minute talks guided by the SI leader about occurrences in the course during the previous week. Thereafter the participants decide areas they want to focus on during the SI session; these may range from terminology, theorems/proofs, or concepts that need clarification to problems that have been hard understand and solve. In addition – time allowing, which is generally the case - the participants work with more difficult tasks of exam character that the SI leader has prepared. The SI leader usually divides the group into smaller sub-groups to ensure that all participants may be active and able to contribute in the work with the material. The SI leader’s main task is thereafter to work as a facilitator to ensure that the work and discussions in the groups progress smoothly. This is done, for instance, by asking or redirecting questions within the group, helping to break down problems, and encouraging participants to help each other towards understanding or pose critical and probing questions. It is essential that the SI leader works to obtain an open climate in the group whereby all participants are free to ask questions they want answered. The SI sessions are generally concluded with the participants presenting the solutions and answers they achieved, for each other, using the blackboard.

There are several aims with the SI sessions in calculus at LTH. Obviously it is an extra learning opportunity in a difficult course. However, it is NOT a help session for less able students. Instead, the sessions benefit from having students with different prerequisites and abilities in math as they help each other to understand the difficult parts of the relevant course. Other aims are of a more general character. It serves as a bridge between secondary school and the university in the method of studying and in the recognition of what assets fellow students are. Students learn that they can solve problems together which they were not able to do on their own, and they train themselves in learning strategies, in critical thinking, in discussion of course material, and in presentations of problems and solutions in front of others.

The division into “Weak”, “Average,” and “Strong” Students

Since Calculus in One Variable is the first mathematics course taken by new students at the university, we make the division of “weak”, “average,”

and “strong” students based on their average grade in mathematics in high school. In order to make the numerical values of the average mathematics grade in high school understandable for the reader, some insight into the Swedish high school system is needed: it usually spans over three years and consists of programs with different orientations (natural science, economy, humanities, etc.), and it is composed of some 20-25 courses. In each course each student obtains a grade. Besides Fail, the grades are Pass, Good, and Excellent. When applying to be admitted to the university, one does so on the basis of the average grade in all courses (with compensation for different sizes of courses). Here Pass is given the numerical value 10, Good is given 15, and Excellent is given 20. This means that the high school average grade is a numerical value somewhere between 10.0 and 20.0. Here we used the same approach to determine the average grade in the five math courses in high school in order to obtain a measure of the student ability in mathematics when they enter university.

That the average mathematics grade in high school has a clear relation to success in the Calculus in One Variable course can be seen in Figure 1 below. Therefore, it seems reasonable to use high school mathematics grades as a measure of their initial ability in the Calculus in One Variable course. In the following we define “weak” students as having an average mathematics grade in high school in the range of 10.0-15.0. Similarly, we define “average” and “strong” students as having an average mathematics grade from high school in the range of 15.1-18.0 and 18.1-20.0 respectively. The reason for using uneven grade intervals is partly due to the fact that most students entering LTH have quite high grades in mathematics, and we want our groups of students not to differ too much in number. It is also partly due to the fact that a student with a mathematics grade below 15 (regardless of whether their average high school math grade was 10, 11, 12, 13, or 14) has a very poor chance of passing an exam in Calculus in One Variable, as can be also seen in Figure 1 below. Therefore, it seems reasonable to have a larger grade interval to cover “weak” students.

Results

SI Attendance

The attendance in SI sessions attached to the course in Calculus in One Variable is shown in figure 2. The attendance at the SI sessions was fairly good during autumn 2009: on an average, about 44 %, meaning a small increase from the year before. Eighty-two percent of the students attended at least one SI session. Only 7 % had a perfect attendance record, and the median student attended five SI sessions. The

average number of participants at an SI session attached to the calculus course during the autumn semester 2009 was 10.6.

Number of Students Passing the Course Calculus in One Variable as a Function of SI Attendance and Previous Math Ability

In Table 1 the results in Calculus in One Variable, expressed as the percentage of students passing the course, are given as a function of SI attendance. The percentage of students passing the course indicate a pronounced correlation with the number of SI sessions they attended and there is a remarkable difference – 40 % – between students with high attendance records and those who did not attend SI! To see whether these differences are statistically significant, we used a chi-square test. As can be seen in table 1 the differences in students passing the course are indeed highly significant between the two groups with high or average SI-attendance and the non-attendance group. Although the better course results for the low SI-attendance group are not statistically significant, the difference in student success compared to the group that did not attend SI is big enough to suggest that even these students benefitted from the times they participated in SI sessions. However, there is a weak tendency showing that students attending SI had a higher math grade average from high school in general, significant at the weakest level between the high-attendance SI group and the non-attendance group (this result is different from some other studies that have shown weaker pre-entry characteristics for SI attendees: e.g., Congos & Schoeps, 1993; Hensen & Shelley, 2003; McGee, 2005; Rath, Peterfreund, Xenos, Bayliss, & Carnal, 2007). To minimize this effect we divided the students as “weak”, “average”, or “strong” based on their average mathematics grade from high school. By this procedure we neutralized the effect of differences in math grades between SI attendees and non-attendees (the differences in math grades in the weak, average and strong groups were 0.1 or less). In Table 2 the results in Calculus in One Variable, expressed as a percentage of students passing the course, are given for “weak”, “average,” and “strong” students as a function of SI attendance. In all three student groups there are highly significant differences in the percentage of students passing the Calculus course between those having average to high SI-attendance records (except for the average SI-attendance group among the “weak” students) compared to those not attending SI. Obviously the biggest differences are between the high SI-attendance group and the non-attendance group. For the “weak” students the difference in percentage of students passing the course is 37 % higher for the high SI-attendance group, for “average” students the difference

Figure 1

Percentage of Students Passing the October Exam 2007 in Calculus in One Variable Related to their Average Mathematics Grade in High School. (In total 942 students took the exam [from Malm, 2009])

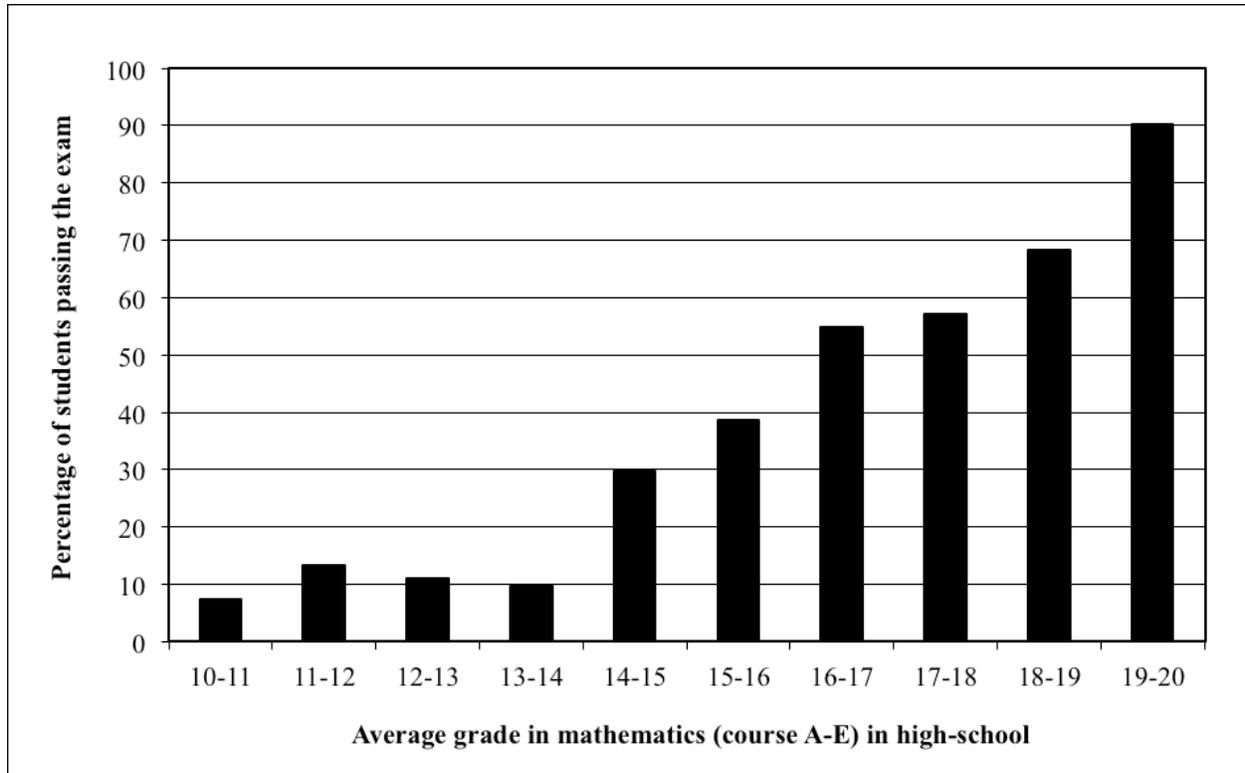


Figure 2

Attendance at SI Sessions in the Course Calculus in One Variable During the Autumn of 2009 (12 SI sessions scheduled for each student)

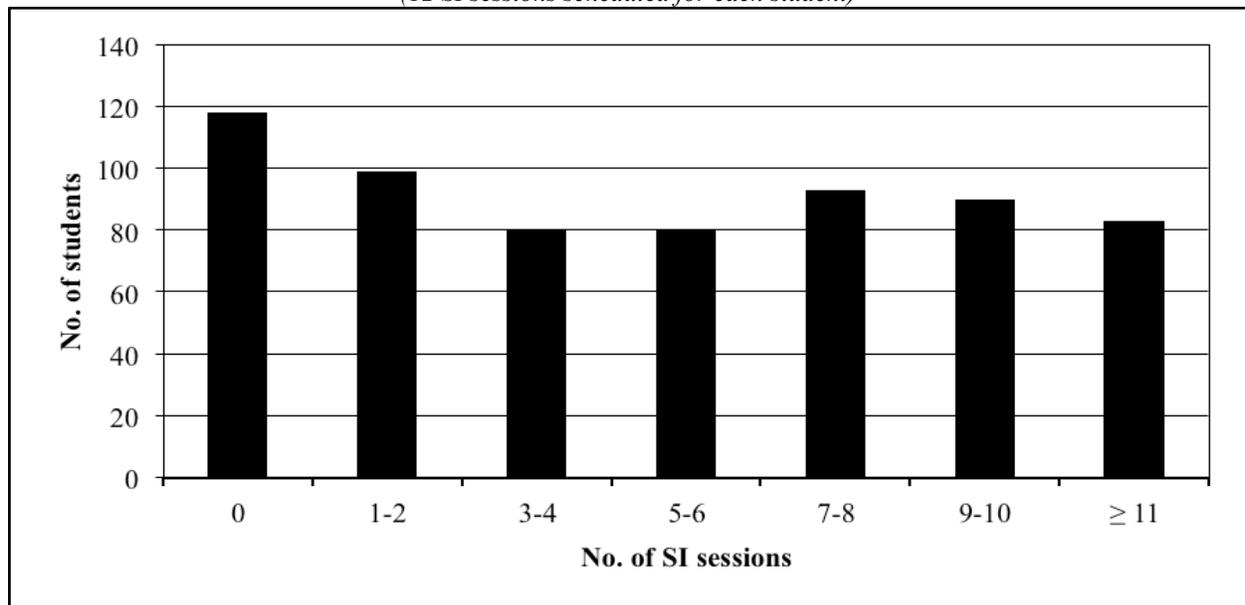


Table 1
Results from the Course in Calculus in One Variable as a Function of SI Attendance.

	Attendance (No. of SI sessions)			
	None (0)	Low (1-4)	Average (5-8)	High (≥ 9)
Registered students in the course	118	179	173	173
Percentage of students passing the entire course after the first academic year	39%	49%	65%***	79%***
Average grade in mathematics in high school	16.6	16.6	16.9	17.2*

Note. Statistically significant differences in results using a chi-square test with $p < 0.05$, $p < 0.01$ and $p < 0.001$ compared to the student group that did not participate in any SI sessions are marked with *, ** and ***.

Table 2
Results from the Course in Calculus in One Variable as a Function of SI Attendance and Average Grades in Mathematics in High School.

SI attendance (Number of SI sessions)	Percentage of students passing the entire course after the first academic year
“Weak” students (group with 10.0-15.0 in average mathematics grade in high school)	
None (0)	19% (9 of 47)
Low (1-4)	23% (14 of 60)
Average (5-8)	35% (19 of 55)
High (≥ 9)	56% (24 of 43)***
“Average” students (group with 15.1-18.0 in average mathematics grade in high school)	
None (0)	38% (11 of 29)
Low (1-4)	51% (33 of 65)
Average (5-8)	68% (38 of 56)**
High (≥ 9)	80% (47 of 59)***
“Strong” students (group with 18.1-20.0 in average mathematics grade in high school)	
None (0)	62% (26 of 42)
Low (1-4)	74% (40 of 54)
Average (5-8)	87% (54 of 62)**
High (≥ 9)	94% (67 of 71)***

Note. Statistically significant differences in results using a chi-square test with $p < 0.05$, $p < 0.01$ and $p < 0.001$ compared to the student group that did not participate in any SI sessions are marked with *, ** and ***.

is 42% higher for the high SI-attendance group, and finally for “strong” students the difference is 32 % higher for the high SI-attendance group. This indicates that, independent of whether a student has a “weak”, “average,” or “strong” mathematics background from high school, he or she can increase his or her chances for success in the Calculus course by attending SI sessions. The more one attends SI, the more one is likely to benefit.

Perhaps the most remarkable result is that the percentage of “weak” students with high SI attendance

passing the Calculus course is very close to the percentage of “strong” students with no SI attendance passing the Calculus course. This surely suggests that SI can make a big difference for students!

Discussion

The results above suggest that SI is a powerful method for achieving better student success in difficult courses. SI success does not discriminate between students who had

previous low, average, or high ability in the subject in high school: all perform seemingly better on the average after attending SI. Unfortunately, it is not possible to determine exactly to what degree SI is the cause of SI participants performing better since participation in SI sessions is optional and we therefore experience the potential bias due to self-selection. However, it is possible to at least estimate the influence of some alternate explanations for the fact that SI participants perform better; such differences might include ability, motivation, study techniques, and learning strategy between SI participants and those not attending SI. That a difference in ability (as measured by the average grade in high school) did not have a significant impact on SI participants having better results was shown above. To address the effect of possible differences in motivation, study technique, and learning strategy between the SI and non-SI groups, we passed out a questionnaire with 13 questions to the new students just before the semester started. The questions covered the areas motivation/attitude, abilities (besides high school grades), and study techniques/learning strategies. The results for the groups of SI attendees and non-attendees are shown in table 3. [Obviously more rigorous and scientifically tested methods, like for instance *Study Process Questionnaire* (Biggs, Kember, & Leung, 2001) or *Approaches to Studying Inventory* (Entwistle & McCune, 2004) for measuring learning approach, are needed to conclusively determine whether there are differences between the groups of SI attendees and non-attendees in the areas covered here. However, this would also require several different and extensive questionnaires to be given to the new students, which was not considered possible at the time. Therefore, we decided to employ a simpler and more general inquiry.]

In total 92 % of 390 SI attendees filled in and returned the questionnaire. Of the 285 non-attendees, 85 % answered it. Significant differences in answers between SI attendees and non-attendees were the following:

1. SI attendees are a little more motivated to study.
2. SI attendees are a bit better in working in groups.
3. A slightly higher percentage of SI attendees come from families where a higher education is unusual.
4. SI attendees are also characterized by a better learning strategy in that
 - a) they have better attention spans and can study for longer periods of time,
 - b) they are less dependent on “last-minute” efforts, and

- c) they are used to helping/being helped by classmates in understanding difficult problems in a course.

In order to see whether these differences could lead to significant differences in study results between the SI attendees and non-attendees, we need to see if students giving different answers to a question have different study results. This can be done by comparing the results on the first major exam in Calculus in One Variable for students giving different answers on a question; see Table 4. In most cases the differences in exam results are small between the students giving different answers on a question. Some more pronounced differences are likely due to the fact that the number of students representing one of the answers is small, leading to larger uncertainties. Statements from students who have significant differences in exam results among them include the following:

1. “I like mathematics.” (Exam results show that the liking is reciprocated.)
2. “I’m worried whether I will be able to pass the mathematics courses.” (Exam results show that these worries to some extent are justified.)
3. “I’m good at solving problems in subjects like mathematics and physics.” (If so, you have on average a better result on the exam.)
4. “My studies usually come easy to me.” (If so, the results are definitely better than if not.)
5. “I took my courses in high school largely by cramming at the last minute before major tests.” (If so, the chances of success on the exam were smaller compared to students who did not resort to “last-minute” studying).

For the first four questions there are no significant differences in answers between SI attendees and non-attendees. Instead, we focus on the last point regarding how differences in studying approaches affect the results on the exam for the groups of SI attendees and non-attendees. It is obvious that better learning techniques benefit the SI attendees on the exam. A simple estimate from the tables shows, however, that this advantage is small – less than two percent more students passed the exam among the SI attendees. We can therefore conclude that the combined effect of differences in motivation/attitude, ability, and study techniques/learning strategy, as measured by the questionnaire, is very small indeed on the results in the calculus course between SI attendees and non-attendees. There are most likely other effects than the ones investigated above that contribute to the comparative success of SI attendees in the calculus course, but it does not seem likely that they completely eradicate the effect of the SI sessions themselves on

Table 3
*Comparison of Questionnaire Answers Between SI Attendees and Non-attendees in the
 First Quarter of the Academic Year*

(an SI attendee is defined as a student who participated in three or more SI sessions during the first quarter)

Question	SI attendee			Non-attendee		
	True	Neither true nor false	False	True	Neither true nor false	False
Motivation/Attitude						
I 'm confident that the engineering education I've started is right for me	77%	17%	6%	72%	19%	9%
I'm very motivated to study	86%*	11%*	3%*	79%*	18%*	3%*
I like mathematics	75%	19%	5%	73%	20%	7%
I'm very interested in the courses that are included in my engineering program	83%	14%	3%	82%	15%	3%
I'm worried whether I will be able to pass the mathematics courses	39%	30%	32%	32%	29%	39%
Abilities						
I'm good at solving problems in subjects like mathematics and physics	63%	33%	4%	66%	26%	8%
I'm good at working with others in a group	88%**	10%**	2%**	79%**	16%**	5%**
I'm from a family where a higher education is unusual	29%*	19%*	52%*	24%*	13%*	63%*
I'm good at thinking critically/analytically	70%	26%	4%	69%	27%	4%
My studies usually come easy to me	70%	27%	3%	70%	27%	3%
Study techniques/Learning strategy						
I went through my courses in high school largely by cramming at the last-minute before major tests	26%**	26%**	48%**	38%**	28%**	35%**
I'm used to helping/being helped by my classmates in understanding difficult problems in a course	66%**	25%**	10%**	61%**	20%**	18%**
I had a good attention span in high school and could spent a lot of time studying	44%**	29%**	27%**	32%**	30%**	38%**

Note. Statistically significant differences in distribution of answers between SI attendees and non-attendees using a chi-square test are marked with *, **, and *** (corresponding to $p < 0.05$, $p < 0.01$, and $p < 0.001$).

course results. (A small-scale study by Parkinson (2009) in which self-selection bias was eliminated showed significantly better results in mathematics for SI attendees.). One possible factor not investigated here is the "double exposure" to the subject received by attending SI (once by attending the usual lectures and classes and an additional time by attending SI sessions). Kenney & Kallison (1994) did an investigation on a college-level calculus course for business majors to address this question. Two classes with the same lecturer

and course content (and equivalence between students in the classes with respect to a list of factors like mathematics ability and achievement measures, gender, ethnicity, etc.) were followed, one where the teaching assistants (TA's) were using a traditional content-only focus and one where the TA's were using SI methodology. A comparison showed that the final course grades were significantly higher for the SI group, thus indicating that the success of the SI attendees is not just a "double exposure" effect.

Table 4
Comparison of Questionnaire Answers to Results on the First Exam in Calculus in One Variable

Question		True	Neither true nor false	
			false	False
Motivation/Attitude				
I'm confident that the engineering education I've started is right for me	Number of students	438	101	32
	Percentage passing exam	60	49	50
I'm very motivated to study	Number of students	483	81	15
	Percentage passing exam	59	52	47
I like mathematics	Number of students	432	114	34
	Percentage passing exam	60*	53*	35*
I'm very interested in the courses that make up my engineering program	Number of students	484	76	16
	Percentage passing exam	59	46	62
I'm worried whether I will be able to pass the mathematics courses	Number of students	208	175	196
	Percentage passing exam	47***	58***	67***
Abilities				
I'm good at solving problems in subjects like mathematics and physics	Number of students	372	175	33
	Percentage passing exam	64***	46***	39***
I'm good at working with others in a group	Number of students	492	70	19
	Percentage passing exam	57	57	63
I'm from a family where a higher education is unusual	Number of students	158	97	325
	Percentage passing exam	56	56	58
I'm good at thinking critically/analytically	Number of students	406	150	22
	Percentage passing exam	59	51	68
My studies usually come easy to me	Number of students	407	153	20
	Percentage passing exam	61*	56*	35*
Study techniques/Learning strategy				
I took my courses in high school largely by cramming for tests at the last-minute	Number of students	188	153	247
	Percentage passing exam	49***	51***	65***
I'm used to helping/being helped by my classmates in understanding difficult problems in a course	Number of students	370	132	76
	Percentage passing exam	58	57	54
I was good at studying continuously in high school	Number of students	227	169	181
	Percentage passing exam	63	56	52

Note. Statistically significant differences compared to the average percentage of students passing the exam using a chi-square test are marked with *, **, and *** (corresponding to $p < 0.05$, $p < 0.01$, and $p < 0.001$).

Conclusions

The study shows that students improve their chances of passing a difficult introductory calculus course by attending SI sessions. The more sessions the student attends, the greater the chances of success in the

course. For students with high SI attendance, 79 % of the students received a passing grade in the course within the first academic year (2009/10) compared to only 39 % of the students who did not attend any SI sessions. An average or high attendance at SI sessions significantly increases the chances of passing the

calculus course irrespective of prior mathematical ability (expressed in terms of average mathematics grades from high school). Perhaps the most perplexing finding is that students with a “weak” mathematical ability in high school but high SI attendance pass the course almost at the same rate as students with a “strong” mathematical ability in high school and non-attendance at SI.

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The Role of Non-Classroom Faculty in Student Learning Outcomes in Higher Education Context

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Researchers have identified a number of learning experiences including faculty-student interaction which affect students' gains in learning outcomes in higher education. This study specifically focused on the relationship between out-of-class faculty-student contact and student learning gains in a language teacher education program. The study was based on data gathered from 116 senior students at English Language Teacher Education Department of Cukurova University, Turkey. The results suggest that the main contribution of contact with faculty members is attributed to gains in knowledge and subject matter competence. On the other hand, faculty contact is not seen as a source of intellectual growth and practical competence by the participant students. The findings of the study prove to be valuable for showing insights about the relationship between faculty-student interaction and specific learning gains.

Introduction

The ultimate purpose of higher education is educating the whole person (Berdahl, 1995; Bowen, 1997; Kellogg Forum on Higher Education for the Public Good, 2002; Kim, 2007). In more specific terms, higher education exists to promote student learning in the areas of cognitive skills and intellectual growth, subject matter competence, emotional and moral development, practical competence, independent learning skills, and vocational competence, as demonstrated by various research in higher education literature. Pascarella and Terenzini (1991) analyzed the results of thousands of studies in this area, and as a result of their extensive analyses they found that attending higher education was associated with significant gains in several domains, including verbal skills, quantitative skills, cognitive growth, self-concept, self-esteem, moral development, attitude, and value changes. Their comprehensive work also pointed out that the learning opportunities and the nature of the students' personal experiences play a significant role in learning outcomes. In fact, as was suggested by many other researchers as well, the students' experiences during college have more impact on the students than the nature of the colleges or universities themselves (Terenzini and Pascarella, 1994; Kuh, 1995; Terenzini, Pascarella, & Blimling, 1999; Astin, 2003; Winston, 2003; Pascarella, 2006; Goodman, 2007).

A research conducted by Astin (1993) showed that popular measures of academic program quality such as educational expenditures per student, faculty/student ratios, faculty salaries, and research productivity alone had little or no direct effect on student development. Instead, learning, academic performance, and retention all were associated with the students' interactions with their peers, with faculty members, with involvement in out-of-class activities. In their study, Chickering and Gamson (1991) synthesized the existing evidence on the impact of higher education on students, and they made a

list of seven broad categories or principles for good practice in undergraduate education: (1) student-faculty contact, (2) cooperation among students, (3) active learning, (4) prompt feedback to students, (5) time on task, (6) high expectations, and (7) respect for diverse students and diverse ways of knowing. That is, they named student-faculty contact as one of the good practices in post-secondary education.

In accordance with Chickering and Gamson, several researchers also highlighted the strong association faculty – student contact to enhanced student learning. For example, a study conducted by Umbach and Wawrzynski (2005) demonstrated that faculty do matter. The findings of this study suggested that the educational context created by faculty behaviors and attitudes has a dramatic effect on student learning and engagement. Institutions in which faculty members create an environment that emphasizes effective educational practices have students who are active participants in their learning and perceive greater gains from their undergraduate experience. Similarly, Astin (1993) found that student-faculty interactions were positively correlated with both personal and intellectual growth. Also Hattie (2003) sees faculty members as an important source of variance in influencing learning outcomes. Students' out of classroom contacts with faculty members have also been associated with gains in academic and cognitive development (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1994). Also, a review of literature by Sax, Bryant, and Harper (2005) revealed the existence of significant relationships between the amount of time students spend interacting with faculty members and a variety of educational and personal outcomes, including academic skill development, social self-confidence, academic and social integration, altruism/social activism, leadership ability, artistic inclinations, occupational values, gains in educational and degree aspirations, satisfaction, and retention.

Drawing upon prior research on faculty-student contact, it can then be argued that student involvement with faculty members outside of the classroom enhances almost all aspects of learning and academic performance. This study further explores the nature of learning gains that students relate to their face-to-face interaction with the faculty members outside the classroom lectures. We propose that for understanding the possible effects of out-of-class faculty contact on student learning, and thus, for improving the quality of learning at formal higher educational institutions, students' involvement in out-of-class interactions with their faculty members needs to be examined more closely. To this end, the study specifically focuses on the relationship between out-of-class faculty-student contact and students' self-reported learning gains. The overall purpose of the study is to identify the associations between out-of-class faculty-student contact and learning outcomes as perceived by students themselves.

Method

Scope of the Study

This study was part of a large-scale research study intended to explore the influence of higher education experiences on English Language Teacher Education students' learning outcomes. In their research study, Sahinkarakas, Inozu, and Yumru (2010) investigated the relationship between learning outcomes and their antecedent experiences in the higher education context. The present study, however, focuses on one single area of learning experience, student-faculty contact. Within the framework of this study, student-faculty contact was defined as non-classroom face-to-face interactions with faculty members, reflecting various forms of contact between the two parts such as discussion of assignments with an instructor, exchange of ideas on academic performance, discussion about subject matter outside the classroom, conversation regarding career plans, friendly chat, or accompaniment with the instructor in a social work or academic occasion. Thus, any faculty interest in either teaching or students' personal development is considered as faculty contact within the scope of the study.

Educators at all levels believe that frequent and meaningful interactions between students and their teachers are important to learning and personal development (Kuh & Hu, 2001). But the virtues of student-faculty contact are highly extolled in higher education context. Especially in teacher education programs, the benefits of faculty contact are invaluable as teacher education is a multi-faceted and multi-disciplinary activity (Kelly, Grenfell, Allan, Kriza, & McEvoy, 2004). The scope of learning outcomes of

teacher education programs includes theoretical knowledge, practical skills and strategies, and social competences. Throughout the programs, students are often required to make connections between theory and practice. Reflective thinking and the teaching component of teacher education programs incorporated into the curriculum also asks for students to be thinkers, researchers, problem solvers, and decision makers in the process of being teachers. Within this scope, student-faculty interactions are expected to contribute positively to the academic, professional, and personal development of students enrolled in teacher education departments. Following this line of thought, this study investigates the learning outcomes that senior students, who were enrolled at the English Language Teacher Education Department, associated with faculty contact. The ultimate purpose was to discover the nature of the learning outcomes which were attributed to faculty contact as perceived by the participant students. Two research questions guided the current study:

1. What is the relationship of student-faculty contact to student self-reported learning gains?
2. What is the nature of the learning outcomes which are attributed to faculty contact, as reported by students?

Guiding Framework

Two frameworks were considered while conducting the study. The first was the "European Profile for Language Teacher Education" (Kelly et al., 2004), a frame of reference which proposes key elements to be included in a teacher education program to equip language teachers with necessary professional competencies. The purpose of the profile is to provide a common frame of reference in the education of foreign language teachers. The profile specifies items relating to *knowledge and understanding*, what trainee language teachers should know and understand about teaching and learning languages as a result of their initial and in-service teacher education; *strategies and skills*, what trainee teachers should know how to do in teaching and learning situations; and *the values* that trainee language teachers should be taught to promote in and through their language teaching (Kelly et al., 2004). Although the framework was designed as a resource for European institutional policy makers in the field of teacher education, the content of the profile is a guide for language teacher trainers by identifying the scope of learning outcomes of teacher education. Student learning outcomes, as stated by Frye (1999), encompass a wide range of student attributes and abilities, both cognitive and affective, which are a measure of how their college experiences have supported their development as individuals. According to the

researcher, cognitive outcomes include demonstrable acquisition of specific knowledge and skills in a major, more specifically, what students know that they didn't know before, and what they do that they couldn't do before. Affective outcomes, on the other hand, relates to how the college experience impacts students' values, goals, attitudes, self-concepts, world views, and behaviors; how it develops their many potentials; and how it enhances their value to themselves, their families, and their communities. In line with Frye (1999) then, it can be said that the scope of learning outcomes for language teacher education includes theoretical knowledge, practical skills and strategies, personal development, and social competencies.

The second framework used to guide the study was "Turkish Higher Education National Qualifications Framework" (Higher Education Institution, 2009). It was developed by Higher Education Council to revise and restructure university education in Turkey. This framework explicitly identifies the learning outcomes of higher education under two broad categories: knowledge-skills and personal-vocational competencies. The *Knowledge and Skills* category contains items related to theoretical and practical issues, whereas the *Personal and Vocational Competencies* category includes items such as independent learning skills, learning to learn, management, leadership skills, social competence, communication skills, ethical issues, and professional development skills.

When the items included in both of the frameworks discussed above compared, it can be concluded that the content in these two frameworks are almost identical to each other in their description of the learning outcomes. Thus, the items included in the list of the learning outcomes used for the data collection purpose in this present study is a synthesis of these two frameworks, namely, the "European Profile for Language Teacher Education" and the "Turkish Higher Education National Qualifications Framework," and they can be grouped under three categories as suggested by the profile: knowledge and understanding, strategies and skills, and thirdly values.

Context of the Study

The study was conducted at one of the leading universities of Turkey. The university, besides various other programs, offers a conventional on-campus ELT (English Language Teaching) program in the Faculty of Education, English Language Teacher Education Department. The curriculum of the program includes various courses in the following areas: language skills, communication skills, approaches and techniques in language teaching, the teaching of English to young learners, literature, language acquisition, materials design, use of technology in language teaching,

introduction to linguistics, language assessment, translation, educational sciences, and some elective courses. The methodology courses such as teaching English to young learners, teaching language skills, or language teaching materials development and adaptation are both theoretical and practical in nature. That is, in such courses, students are given opportunity for applications of theory during class time.

Also the department where the data of the study was collected was among the top ten in the field of language teacher education. There are approximately 30 lecturers working at the department. The majority hold doctoral degrees in English Language Teaching. Each lecturer in the department has a workload of 10 to 15 hours of teaching per week. In addition to classroom teaching, each lecturer also has to schedule four hours of advising sessions for specific group of students (25 in average) to whom she or he is assigned as adviser by the head of the department. But impromptu office visits by students are also welcomed by advisors or any faculty member. The social atmosphere at the department can be described as quite supportive and intimate, allowing students, who are trainee teachers, to feel free in communicating with faculty members outside the classroom. Students also take courses from the Department of Educational Sciences throughout their education in the department. Since both English Language Teacher Education and Educational Sciences Departments are the divisions of the Faculty of Education, the situation regarding faculty-student contact is very much similar in each.

Participants and Data Collection

Data were drawn from a study of senior students (116 in total) enrolled at the English Language Teacher Education Department of Cukurova University, Adana, Turkey. Their ages range between 20 and 22. As the language teacher education program where the study was conducted has a preparatory year, the majority of the students have been attending this university for four and a half years at the time of the study. In all 116 students participated in the larger scale research study (Sahinkarakas, Inozu, & Yumru, 2010), 61 students reported faculty contact as an item of learning experience contributing to their gains in the program. So students who viewed faculty contact as a learning experience were included in the present study.

Following the discussion of the purpose of the study with those 61 participant students in their regular course hours, they were administered a questionnaire comprised of 43 expected learning outcomes which were developed from the two sources: "European Profile for Language Teacher Education" and "Turkish Higher Education National Qualifications Framework." The students were asked to check the items which they

believe they have learned from their non-classroom contact with faculty members. In order to avoid any misunderstanding that might occur in students' minds, they were given a clear oral description of what was meant by out-of-class faculty contact before the administration of the questionnaire. That is, it was explained to them that student-faculty contact meant non-classroom face-to-face interactions with faculty members, and they were also given some examples such as discussing assignments with an instructor in her/his office, exchanging ideas on academic performance during breaks, discussing subject matter outside the classroom, talking about career plans, having a friendly chat, or accompanying the instructor in a social work or academic occasion.

Data Analysis

First, descriptive statistics were computed for the variables of learning outcomes. Then, the items which were ticked by the equal number of students were grouped together in order to see whether there was any consistency among the responses in terms of the type of learning outcome that each item belongs to as suggested by the European Profile for Language Teacher Education: *Knowledge and Understanding, Strategies, and Skills* and *Values*. Then, for a more detailed analysis of the data, the learning outcomes included in each main category were reclassified under subcategories according to the taxonomy of learning outcomes developed by Kuh (1995). The taxonomy lists five domains of outcomes: *interpersonal competence*, reflecting individual's self-confidence, social competence, autonomy and self-awareness; *practical competence*, which is related to vocational competence; *cognitive complexity*, relating to application of knowledge and reflective judgement; *knowledge and academic skills*, including subject matter competence; and finally, *humanitarianism*, which covers altruism and aesthetics. Under these broad categories of outcome domains, the taxonomy also identifies specific outcomes. Six of these outcomes (see Table 1 on the next page), which were matching with the scope of this study, were used in data analysis. The purpose of this second stage of analysis was to reveal the nature of the relation between student-faculty contact and the learning outcomes more specifically. The table below illustrates the categories of the learning outcomes according to the three frames: European Profile for Language Teacher Education, Turkish Higher Education National Qualifications Framework and Kuh's "Taxonomy of Outcome Domains."

As mentioned before, the learning outcomes identified in the "European Profile for Language Teacher Education" and "Turkish Higher Education National Qualifications Framework" are almost

identical considering their content. Both include subject-matter related knowledge, professional skills, and social competence. Kuh's (1995) taxonomy of learning outcomes covers all, and it also provides a more detailed description of these outcomes allowing us to analyze the relation between out-of-class faculty-student contacts and learning gains in dept.

Results

The descriptive analysis of the data revealed that students perceive some learning gains, such as development in linguistic competence or theoretical knowledge about the field of study, as an outcome of faculty contact. While many positive relationships are seen between student-faculty contact and student self-reported gains, it is equally significant to find that the contact with faculty members contributes to gains in certain domains of learning outcomes. In this part, we first summarize the general findings concerning the pattern of relations between faculty contact and the three domains of learning outcomes. Then the results reached in these three outcome domains are dealt with separately.

General Findings

The results suggest that student-faculty contact influence student learning. However, the benefit of faculty contact is not equal for all types of learning outcomes. The numbers show that the gains in *knowledge and understanding* category are the largest as compared to gains in the other two categories of learning outcomes. As it can be seen from Table 2 (see p. 297), while 17.08% of students (in average) related their learning in the category of *knowledge and understanding* to faculty contact, a decrease was observed for the category of *strategies and skills*. The average percentage of students attributing their gains in this category of learning outcomes to faculty contact was only 12.42. Following the learning outcomes in *knowledge and understanding* category, the second largest contribution of faculty contact was to the category of *values*. Approximately 16% of students linked gains in personal growth to faculty contact. Table 2 summarizes students' self-reported learning outcomes attributed to faculty contact and the percentage of students choosing each item.

When the learning outcomes which were perceived by at least 20% of students as related to the contact with faculty members were grouped together, it was seen that the majority of the items in this group belonged to the category of "Knowledge and Understanding." The most frequently chosen outcomes were "following the innovation in my field of study" (32.78%, n=20) and "developing my linguistic competence" (32.78%,

Table 1
Learning Outcomes

European Profile for Language Teacher Education	Turkish Higher Education National Qualifications	Kuh's Taxonomy of Outcome Domains
1. Knowledge and Understanding	1. Knowledge and Skills	1. Knowledge and Subject- Matter Competence
2. Strategies and Skills	2. Personal and Vocational Competence	2. Cognitive Skills and Intellectual Growth
3. Values		3. Practical Competence
		4. Autonomy and Self-directedness
		5. Vocational Competence
		6. Values

n=20), with “theoretical knowledge about my field of study” (22.95%, n=14) the third, followed by “language teaching methodologies” (21.31%, n=13), “critical and enquiring approach to teaching and learning” (21.31%, n=13), “applying information and communication technology (ICT) for pedagogical use in the classroom” (21.31%, n=13), “reflective practice and self-evaluation” (19.67%, n=12), “importance of teaching and learning about foreign languages and cultures” (19.67%, n=12), and ‘growth in exercising rights, possibilities, and privileges as a citizen’ (19.67%, n=12). Out of nine learning outcomes mentioned here, the first six items represent *Knowledge and Understanding*, the seventh *Strategies and Skills*, and the last two *Values* (Table 2). Thus, it can be inferred that student-faculty contact is more associated with gains in the area of knowledge and subject matter competence. Yet, interaction with faculty members is not seen as a source of vocational growth and practical competence by the participant students.

Results Concerning the Outcome Domain of Knowledge and Understanding

As mentioned previously, the first category, *Knowledge and Understanding*, refers to what trainee language teachers know and understand about teaching and learning language resulting from their education. We examined this category under two sub-categories in accordance with Kuh's (1995) taxonomy of learning outcomes. The first one, *Knowledge and Subject-Matter Competence*, refers to academic and course-related learning and the content mastery of the participants. The second sub-category under Knowledge and Understanding, *Cognitive Skills and Intellectual Growth*, refers to the ability to synthesize information and experiences, to see connections between thinking and experiences, and to express reflective thought (see appendix for the list of questionnaire items in each subcategory).

The numbers in Table 2 suggest that the students who participated in this study associated faculty contact the most with gains in knowledge and understanding category. But the findings also revealed that not all of the items in this category were thought by the students as linked to faculty contact. The majority of learning outcomes attributed to student-faculty contact concerned the knowledge and subject-matter competence: developing my linguistic competence (32.78%), following innovations in the field of study (32.78%), theoretical knowledge about the field of study (22.95%), and knowledge of language teaching (21.31%). On the other hand, the percentage of students reporting faculty contact as related to cognitive skills and intellectual growth was pretty small. In descending order, the learning outcomes mentioned by students were scientifically analyzing concepts and ideas in the field of study (9.38%), evaluating and interpreting scientific data in the field of study (9.38%), and critically analyzing the knowledge and skills learned (6.55) (Table 2). Thus, the results showed that the students viewed faculty members as the main agents in creation and negotiation of knowledge. However, student-faculty contact was not found to be beneficial in developing critical and inquiring approaches to what was learned.

Results Concerning the Outcome Domain of Strategies and Skills

Strategies and Skills, which is related to items about knowing how to carry out what has been learned, was the second category and examined in three sub-categories. The first sub-category, *Practical Competence*, means application of knowledge, relating theory to practice, and using skills learned in the classroom. *Autonomy and Self-Directedness*, which corresponds to developing self-awareness, taking responsibility of one's own learning, and movement from dependent to independent thinking was the second sub-category examined. The third sub-category was

Table 2
The Percentage of Students and the Items of Learning Outcomes Attributed to Student-Faculty Contact

Categories of learning outcomes	Items	%
Knowledge and Understanding	5. Following the innovation in my field of study (ELP, CEFR, CLIL, task-based language learning, etc.)	32.78
	7. Developing my linguistic competence	32.78
	3. Theoretical knowledge about my field of study	22.95
	1. Knowledge of language teaching	21.31
	6. Critical and inquiring approach to teaching and learning	21.31
	9. Apply information and communication technology (ICT) for pedagogical use in the classroom	21.31
	12. Critical evaluation of curriculum in terms of aims, objectives and outcomes	18.03
	11. How to record learners' progress	14.75
	2. Knowledge of classroom techniques and activities	12.11
	38. Planning and managing professional development activities	12.11
	13. Theory of program evaluation	12.11
	34. Scientifically analyzing concepts and ideas in my field of study	9.38
	35. Evaluating and interpreting scientific data in my field of study	9.38
	10. Applying information and communication technology (ICT) for personal planning, organization and resource discovery	9.38
	39. Critically analyzing the knowledge and skills learned	6.55
TOTAL (mean)		17.08
Strategies and Skills	18. Reflective practice and self-evaluation	19.67
	16. Methods of learning to learn	16.39
	33. Self-awareness	16.39
	15. How to adapt teaching approaches to the educational context and individual needs of learners	14.75
	17. How to do critical evaluation, development and practical application of teaching materials and resources	14.75
	21. Practical application of curricula and syllabuses	14.75
	36. Identifying, analysing, and proposing solutions to the problems in my field of study	14.75
	37. Getting the responsibility of solving complex problems that might occur during practice	14.75
	40. Identifying learners' needs	14.75
	4. Practical knowledge about my field of study	12.11
	24. Ability to do action research	12.11
	25. Incorporating research into teaching	12.11
	32. Self-confidence	12.11
	8. How to apply various assessment procedures	11.47
	22. Peer observation and peer review	11.47
	26. Use of the European Language Portfolio for self-evaluation	11.47
	41. Reflecting ideas and proposals in a written and spoken form	11.47
	20. Maintaining and enhancing ongoing personal language competence	9.38
14. Practice of program evaluation	8.19	
23. Relationships with educational institutions in appropriate countries	4.91	
19. Independent language learning strategies	3.27	
TOTAL (mean)		12.42
Values	29. Understanding importance of teaching and learning about foreign languages and cultures	19.67
	43. Growth in exercising rights, possibilities, and privileges as a citizen	19.67
	30. Growth in team-working, collaboration and networking, inside and outside the immediate school context	18.03
	31. Understanding the importance of life-long learning	18.03
	28. Knowledge of the diversity of languages and cultures	16.39
	27. Knowledge of the social and cultural values	12.11
42. Developing ethical standards and values on gathering, interpreting, publicizing, and applying data	6.55	
TOTAL (mean)		15.77

Vocational Competence, and it means acquiring attitudes, behaviors, and skills related to post-college employment and reflective practice.

The results of the study showed that the relation between student-faculty contact and learning gains in this category of outcomes was not very positive. Except for the learning outcome of reflective practice and self-evaluation (19.67%), out of 61, the number of students who associated their gains in strategies and skills to faculty contact was either ten or below. That is, only 10% of the students (on average) linked faculty contact to the gains in areas such as developing independent language learning strategies (3.27%), maintaining and enhancing ongoing personal language competence (9.38%), applying various assessment procedures (11.47%), incorporating research into teaching (12.11%), getting the responsibility of solving complex problems that might occur during practice (14.75), and adapting teaching approaches to the educational context and individual needs of learners (14.75) (Table 2).

Results Concerning the Outcome Domain of Values

It has been stated before that the learning outcomes in this category contains items relating to the social and cultural values that language teaching should encourage and promote. Approximately 16% of the students reported that they attributed their gains in acquisition of social and cultural values to their contact with faculty members (Table 2). A high proportion of students associated their contacts with faculty members with gains, especially in understanding importance of teaching and learning about foreign languages and cultures (19.67%) and growth in exercising rights, possibilities, and privileges as a citizen (19.67%) (Table 2).

To conclude, much has been published documenting that out-of-class contact with faculty members is associated with increases in students' learning from college experiences, and the findings of this study provided more evidence for this relation between out-of-class faculty-student contacts and learning gains. However, the results of the present study further revealed the nature of this relation, and they showed us what the students gain from contact with faculty members outside the boundaries of the formal learning context, namely the classroom. In a nutshell, the results indicated that out-of-class face-to-face interaction with faculty members contributes mostly to students' content knowledge in the field of study. In that sense, it can be inferred that contact with faculty members out of the classroom was seen by the participant students as a continuum of in-class teaching where information about subject matter was conveyed through lectures. On the other hand, when it comes to

application of knowledge, intellectual growth, and acquisition of attitudes, behaviors, and skills related to post-college employment, the contribution of non-classroom faculty contact was relatively low.

Discussion

In our era, the education of foreign language teachers does not just include the transmission of core linguistic, pedagogical, and methodological skills required for trainee teachers in their future professional practices. It also relies heavily on the idea of developing autonomous language teachers who are capable of directing and improving themselves not only in their active teaching work but also in their life-long professional development activities in order to be effective in their practices. Current models of teacher training, such as constructivist teaching or the reflective teaching model, view teachers as researchers as much as knowledge providers. That is, teachers are expected to take responsibility for assessing teaching and learning environment, identifying problems, proposing solutions, and making appropriate decisions for creating better learning environments. Certainly, incorporating research into teaching requires teachers to make their own action plans rather than following a mechanical cook book recipe, by asking critical questions such as, "How can I enhance learning?," "What can I do to improve my teaching?," "What decisions should I make?," and "On what basis should I make these decisions?."

The reflective nature of teaching is represented well in the conceptual framework of Colton and Sparks-Langer (1993). They mention five categories of knowledge: knowledge of self as teacher, knowledge of content, knowledge of teaching and learning, knowledge of students, and knowledge of school and societal contexts. These knowledge bases are viewed as essential for what prospective teachers should know and be able to do. According to the framework, there is also a "doing (practice)" dimension to teaching which involves the tasks of planning, implementing, and evaluating. There is also an interaction between "doing" and "knowing." In terms of its content, the framework shares the same underlying principles with the two guiding frameworks of this present study. The common thought behind these frameworks is that teachers are expected to be reflective practitioners. That is, a teacher in our period is supposed to be a "knowing" person and "knowing how" person at the same time. We suggest interactions with faculty members are helpful in setting a context to help students make meaningful connections between theories ("knowing") and practice ("doing"). Nevertheless, the findings of this study revealed that the students who participated in this study viewed faculty

members as a source of theory. In other words, the students associated their non-classroom interactions with teachers primarily with gains in subject matter competence (knowledge). Yet the relationship between gains in cognitive skills and intellectual growth and faculty contact was not strong as reported by the students. Development of practical competence, like relating theory to practice, and vocational competence, like incorporating research into teaching, were not attributed to faculty contact either.

There is no need for discussing the validity of the argument that pre-service teachers' understanding of subject matter affects the quality of their teaching subsequent to their formal training. However, as Shulman (1987) proposes in his theory of teacher knowledge, for successful teaching, despite a teacher's deep understanding of a subject area, s/he must also be able to foster understanding of subject or concepts for students. This requires acquisition of pedagogical content knowledge including practical application of curricula. Students who are trainee teachers develop a critical understanding and application of knowledge and skills learned in the classroom, and faculty members could provide further assistance and guidance outside the classroom hours by initiating and organizing additional out-of-class activities. We believe that extending teaching beyond the classroom through out-of-class activities, in integration with the curriculum, offers invaluable opportunities for students to scientifically analyze, synthesize, and apply the practical knowledge about the field of study.

We think that the findings of this study identify a need for more frequent contact between teachers and students, namely trainee student teachers. According to Kuh and Hu (2001), the more contact between students and faculty members both inside and outside the classroom, the greater the student development is. But, as Pascarella & Terenzini (1991) put it, it is both the frequency and nature of student-faculty interaction combined that have the greatest impact, such as when interactions have an intellectual or substantive focus (e.g., career plans) as contrasted with an exclusively social exchange. Therefore, we suggest that it might be helpful for trainee student teachers to become involved with their teachers in academic events such as professional development seminars and workshops or projects. These kinds of occasions, we believe, provide students with quality educational experiences which contribute to students' practical and vocational competence. The results reached in some studies provide support for our belief. For example, Nagda, Gregerman, Jonides, von Hippel, and Lerner (1998) found out positive contribution of research partnership to students' learning. Their study showed that the integration of students into research projects in which faculty members acted as expert guides helped students

in developing their own cognitive and intellectual skills. In a similar study, Umbach and Wawrzynski (2005) explored the relationship between faculty practices and student engagement. Their findings suggested that students reported higher levels of engagement and learning at institutions where faculty members valued enriching educational experiences. The researchers found that students on campuses where faculty members emphasized co-curricular activities reported greater gains in personal/social development, general education, and practical competencies. There is no doubt that such activities involving student-faculty cooperation would also be helpful in transmission of values from modelling teachers to students.

To sum up, a synthesis of the results of relevant studies indicates that significant associations exist between student-faculty contacts and learning outcomes and that non-classroom interactions with faculty members can maximize learning by enriching educational experiences, which result in different types of outcomes. In accordance with these studies, the results of this present study also revealed the important role that non-classroom faculty contact plays in training of teacher candidates. The study contributed to current literature by describing the nature of learning outcomes that were attributed to contact with faculty members out of the classroom. By doing so, the study at same time identified the areas of learning gains where faculty contact was not found to be satisfactorily efficient by the participant students.

Limitations

Several limitations of our study must be acknowledged when interpreting the results of the study. First, the data of the study was drawn from a single institution. That is, all the participants were from the same department, and thus, the findings were valid only for the educational context of the institution where the study was carried out. For this reason, generalizing the results of the study and transferring the findings to other ELT programs in other universities might not be relevant.

Next, it must be considered that the size of the population researched was limited to 61 students. Given the focus of the study, we could only involve students who view out-of-class faculty contact influential in their learning outcomes in our study. Therefore, out of 116 senior students who had participated in a previously conducted study on learning experiences and outcomes, 61 (53% of all the participants) students who had reported faculty contact as a source of learning gains were involved in this present study. Yet, the participants of the original survey research cover the whole group of seniors enrolled in the program at the time of the study.

Finally, our results about the relationship between out-of-class faculty-student contact and learning outcomes derive mainly from students' self-reported data. However, using objective self reports or asking people directly for information relating to a personal issue is extremely prevalent in most areas of the social sciences (Schwarz, 1999). In our case, as the purpose of the study was to reveal how seniors perceive out-of-class faculty interaction regarding their own learning outcomes, we preferred to rely on the information which came straight from them. Paulhus and Vazire (2007) argue that "no one else has access to more information" than oneself, and that this information is rich with introspective details of which others might not be aware (p. 227).

Conclusion

Studies examining educational settings and practices have focused largely on behaviors inside the formal classroom. However, as Lamport (1993) argues, relatively little research has focused on out of class communication (e.g., impromptu office visits, scheduled advising sessions, chance meetings, etc.). Yet, Lamport (1993) adds, what has been conducted consistently supports the importance of this kind of faculty-student interaction. This study is an attempt to identify the perceived outcomes of such contact between students and faculty members. The results of the study have important implications for language teacher education programs. First, the findings of the study pointed out that faculty members in language teacher education programs need to deeply understand the positive and negative linkages between teacher interaction and students' learning gains. And, also they need to realize the important role that non-classroom student-faculty contact plays in learning outcomes. This study provides insights into higher education experiences of a group of teacher trainees. The results of the study could be used as a baseline and a guide in enrichment of learning environments to improve pre-service teacher preparation programs. The second implication of the study is that the curriculum of language teacher education programs needs to be reconsidered to include courses requiring a wide range of out-of-class (on or off campus) compulsory work for a better professional preparation of prospective language teachers. As Freeman and Johnson (1998) argue, language teaching cannot be understood apart from the sociocultural environments in which it takes place and the processes of establishing and navigating social values in which it is embedded. Another important implication of the study relates to the argument that if we are, as language teacher educators, aiming to train pre-service teachers who are equipped with strategies and skills required to evaluate and

interpret the content knowledge for applying and adapting what they have learned to the educational contexts they would find themselves in when they start working, we should also invest in students' cognitive and intellectual growth throughout the teacher education programs. Structured and purposeful out-of-class faculty contact might contribute to students in this respect. For instance, organizing an undergraduate seminar or forum where trainee students find opportunities to scientifically analyze concepts and ideas in the field and critically discuss their scholarly activities under the mentorship of their faculty members would prove useful.

This study highlights the importance of student-faculty contact in student learning in language teacher education context. Yet, it is equally important to know about which student-faculty contacts are linked with what learning outcomes. So a further study might be conducted to reveal the web of relations between interactions and outcomes. More specifically, the context created by faculty members and its relationship to student self-reported gains can be examined closely in order to find out specific practices that improve the quality of student learning. Positive and negative linkages between faculty-student interaction and outcomes would be a vital area to investigate more deeply through qualitative research, such as learner diaries and reflection logs. Although this study is limited in its scope, we hope that it still sheds light on the vital role that faculty members play in educating foreign language teachers.

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Appendix

A list of main and subcategories of each learning outcome domains and the questionnaire items included in each category is given below:

I. Knowledge and Understanding

- A. *Knowledge and Subject-Matter Competence*: (a) classroom techniques and activities, (b) language teaching methodologies, (c) applying information and communication technology (ICT) for pedagogical use in the classroom, (d) theoretical knowledge about the field of study, (e) applying information and communication technology (ICT) for personal planning, organization and resource discovery, (f) recording learners' progress, and (g) developing linguistic competence.
- B. *Cognitive Skills and Intellectual Growth*: (a) critically analysing the knowledge and skills learned, (b) scientifically analysing concepts and ideas in the field of study, and (c) evaluating and interpreting scientific data in the field of study.

II. Strategies and Skills

- A. *Practical Competence*: (a) how to adapt teaching approaches to the educational context and individual needs of learners, (b) practical knowledge about the field of study, (c) how to apply various assessment procedures, and (d) practical application of curricula and syllabuses.
- B. *Autonomy and Self-Directedness*: (a) self awareness, (b) self confidence, (c) methods of learning to learn, (d) reflecting ideas and proposals in a written and spoken form, (e) reflective practice and self-evaluation, (f) independent language learning activities, (g) getting the responsibility of solving complex problems that might occur during practice, and (h) maintaining and enhancing ongoing personal language competence.
- C. *Vocational Competence*: (a) peer observation and peer review, (b) ability to do action research, (c) incorporating research into teaching, and (d) identifying, analysing and proposing solutions to the problems in the field of study.

III. Values

- (a) understanding importance of teaching and learning about foreign languages and cultures,
(b) growth in team-working, collaboration and networking, inside and outside the immediate school context,
(c) gaining knowledge of the diversity of languages and cultures,
(d) gaining knowledge of the social and cultural values,
(e) growth in exercising rights, possibilities, and privileges as a citizen,
(f) developing ethical standards and values on gathering, interpreting, publicizing and applying data,
(g) understanding the importance of life-long learning.

Effective Teaching in Case-Based Education: Patterns in Teacher Behavior and Their Impact on the Students' Clinical Problem Solving and Learning

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Case-based learning formats, in which relevant case information is provided just in time, require teachers to combine their scaffolding role with an information-providing one. The objective of this study is to establish how this combination of roles affects teacher behavior and that, in turn, mediates students' reasoning and problem solving. Data on actual behaviors, intentions, effects and appreciation were collected using observations of case discussions, interviews, and a questionnaire in a mixed method, concurrent nested design. Cross-case analysis of the observed discussions revealed two patterns of combining the provision of information with scaffolding. Although students commonly responded to scaffolding interventions as intended, the results from the observations and the questionnaire showed that a pattern with a high level of concurrent scaffolding and provision of information should be avoided.

Introduction

Since the emergence of approaches such as case-based and problem-based learning, the way cases are used and their functions in the learning process have extended beyond simple illustrative purposes or opportunities to practice the application of discrete skills (e.g., Barnett-Clarke, 2001; Block, 1996). Which case characteristics effectively contribute to higher-order learning and how students, in their learning from cases, are optimally supported by their teachers depends on the aims and specific type of case-based learning (Barnett-Clarke, 2001; Dolmans & Wolfhagen, 2005). Research has identified three central conditions: high quality cases, a supportive instructional design, and competent teachers (Issenberg, McGaghie, Petrusa, Gordon, & Scalse, 2005; van Berkel & Schmidt, 2000).

High quality cases are meaningful and reflect the issues, problems, and circumstances that professionals are confronted with in reality (Anderson, Reder, & Simon, 1996; Hmelo & Day, 1999); provide similar information (and a similar sensory input) to the real situation (Kester, Kirschner, van Merriënboer, & Baumer, 2001; Minogue & Jones, 2006); and require the same (mental) activities and processes (Brown, Collins, & Duguid, 1989). They arouse curiosity, support the experience of a need-to-know (Edelson, 2002), and call for higher-order thinking (Newmann & Marks, 1996; Weiss, 2003) by using prior knowledge and probing understanding (Boshuizen & Schmidt, 1992).

A *well-designed educational format* provides direction to learning activities, which is particularly valuable to support self-directed and group learning. It clarifies the purposes of learning activities (Dolmans & Schmidt, 2000); offers guidance on effective task approaches, procedures (e.g., the 'seven step' method in problem-based learning, or templates) (Merrill, 2007);

and creates transparency about the roles of participants and criteria for (self-)assessment (Biggs, 1996). Reflection and feedback are considered essential components of a format for supporting the translation of experiences into learning (Hattie & Timperley, 2007; Salomon & Perkins, 1989).

The proficiency of competent teachers extends to the case content, as well as to ways to master this content and how to guide students in accordance with their needs. Although in many case-based learning formats teachers do not function as a main source of information, content expertise helps them recognize the particulars of the reasoning, assumptions, and (mis)understandings of students as well as issues of focus in scaffolding them (Dolmans et al., 2002). Understanding the ways a particular content can be mastered, as well as the typical difficulties that students might encounter and effective ways to help them overcome such hindrances, are beneficial for recognizing the complexities of a case and deciding if, when, and how to intervene in the process (Hattie & Timperley, 2007; van Driel, 2008). Appropriate teacher interventions raise case discussions to a higher level and stimulate students to engage in mastering this content (Hmelo-Silver, Duncan, & Chinn, 2007; Hmelo & Day, 1999). In terms of learning, the students' learning activities and degree of support (scaffolding) they receive should match the achievement of constructive friction (Vermunt & Verloop, 1999).

One of the issues of interest in case-based learning is the optimal timing of information. In many case-based learning formats, students receive all necessary information before or at the beginning of a case session. To simulate the way information becomes available in authentic practices, cases can be designed to allow the just-in-time provision of information. This supposedly also reduces the cognitive load on students handling complex cases (Kester, et al., 2001; Kirschner, 2002).

The just-in-time provision of case information means teachers must fulfill several roles almost simultaneously: providing students with the case-specific information they require, scaffolding them in the process of problem analysis and solving and judging their performances and levels of competence. Fulfilling different roles at the same time can be demanding (Boud & Feletti, 1998) and might lead to (unwanted) interactions between them (Robertson, 2005). This study concerns the ways teachers manage to fulfill these different roles and when students benefit most from this type of case-based learning design. It is guided by the following research questions:

1. How does the requirement to combine an information-providing role and a scaffolding role in this case-based learning format affect teacher behavior?
2. How does this teacher behavior affect the students' reasoning and the problem solving process?

Methods

To allow the exploration of the interactions between the educational setting, teacher interventions, and students' performances in natural circumstances, this study was embedded in on-going coursework. It employed a mixture of methods (observations, interviews, questionnaires) applied in a "concurrent nested design" (Creswell, 2003), with the observations of case discussions as the predominant method. To establish the principles of effective teaching in this format, the findings on teacher behavior, effects on the students' reasoning, and perceived effectiveness were weighted against current notions about effective teaching.

Setting and Educational Design

The Clinical Lessons (veterinary medicine, Utrecht University) aim to provide students with their first experiences of solving realistic clinical problems and train them to reason and decide on clinical situations in accordance with previously studied biomedical theories and guidelines for practice. They are designed to ease the transfer from mastering preclinical subjects (years 1–3) to their application during the clerkships (years 5 and 6).

The clinical lessons take up a large part of the weekly coursework and extend almost throughout the fourth year. The core of the clinical lessons consists of three complementary teaching formats: clinical practicals, demonstrations, and tutorials. The practicals and demonstrations involve real clinical patients, whereas the tutorials build on paper-based cases. In all

formats, the students direct the exploration of the clinical problems and the case discussions to establish optimal "solutions." The teachers' primary roles are to provide students, just-in-time support with additional patient information or guide them in the process and assess their performances. Consistent with the notion of 'scaffolding' (Hmelo & Day, 1999), this support is limited to the degree that students need to handle the complexities of cases at a level that would otherwise be beyond their capacities.

The clinical lessons are taught by a group of experienced veterinary practitioners belonging to the university clinical staff. Their teaching experience ranges from one to over 20 years. Because this particular format has been introduced only recently, teachers have been provided with initial training on conducting clinical tutorials. Student groups receive instruction and support during their first clinical lessons to become familiar with the format, their roles, and mutual expectations.

This study focuses on the tutorials. In this format, the information-providing role of teachers is most pronounced. The design features of the tutorial format are:

- a. Groups of 12 students prepare for the clinical tutorial collaboratively. They receive a case vignette beforehand with initial information about the problem and its context. On the basis of this vignette, they determine which additional patient information is needed, discuss strategic and procedural aspects of the case, and decide which topics to review before the tutorial actually takes place;
- b. Each tutorial covers two cases. On average, there is about 50 minutes per case to explore and discuss findings, choices, and decisions. Starting from the results of their group's preparatory analysis, they further explore the case by following a similar procedure to that used for patient examination in reality. In the role of owner of the animal (patient) or as the referring veterinarian, their teacher provides them, on request, with the additional information they need to deal with the problem. Discussion on the case is led by the students;
- c. During the case exploration, the students can take a "time-out" from the patient examination process to review their approach and problem-solving strategy, to reflect on their findings so far, and to decide how to proceed. Their peers observe the case exploration, participate in the (time-out) discussions, and provide feedback afterwards about the handling of the case;

- d. The last part of tutorials is used for evaluative (self-)reflection and feedback from peers and the teacher. This covers the approach and results, as well as performances of the leading students. The student performances in the tutorials are graded individually 5–8 times a year.

Participants and Data Collection

During the academic years 2005–2008, 63 case discussions were observed and recorded on video- or audiotape to allow for an in-depth qualitative analysis. These observations related to 17 different student groups, 18 teachers, and 44 cases. All student groups and teachers were observed at least twice. No particular student groups or teachers were specifically selected for this study. Within the on-going coursework, nevertheless, tutorials were preselected for observation to cover a sufficient variety of cases, student groups, and teachers, as well as various moments throughout the year. Students and teachers provided informed consent to be audio- or video-recorded. The observing researcher (SR) did not actively participate in the case discussions.

In line with the concurrent nested design, interviews and a questionnaire were used to expand the understanding of observed behavior by revealing teacher preferences and student appreciation for particular aspects of the tutorials:

- Altogether, 16 observed case discussions were followed by a semi-structured, stimulated recall interview with the teachers to reveal their views about occurrences within the observed case discussions and their rationale for interventions;
- During the last year a questionnaire was used to establish the students' appreciation of certain case characteristics, the instructional format, and teacher performances, at a level of separate case discussions. Four students were asked to complete the questionnaire immediately after each case discussion. In total, 1814 completed questionnaires were returned, covering 627 (94.4%) of the sessions that took place. The full questionnaire is available from the first author.

Coding and Analysis of Observations

Video and audio recordings of the observed tutorials were analyzed with ATLAS.ti. The unit of analysis was a single case discussion; the analysis procedure (Miles & Huberman, 1994) was made up of the following steps:

1. Based on the research questions and underlying conceptual framework, a provisional list of codes was developed and applied to the first series (13) of observations to examine for fit and power.
2. As the analysis of case discussions progressed, the code list was restructured and extended to include events not covered in the original scheme. Furthermore, some descriptive codes concerning student and teacher behaviors were replaced by inferential codes reflecting reasoning and scaffolding patterns.
3. When the analysis of new case discussions revealed no more new events (saturation), the final code list was made up of four main categories of codes: problem-solving phases, supportive learning phases, student behaviors, and teacher behaviors.
4. Discourse analysis and cross-case comparison were used to shed light on patterns in the teachers' scaffolding behaviors and the students' reasoning, as well as on changes during the year.
5. Irregular occurrences and behaviors were reviewed to check our understanding of the case discussions and hypotheses about the teacher–student interactions, and to disclose hidden themes or phenomena.

Table 1 shows an overview of the coding scheme. The “behavior” categories are nested within the “phases.” Phases cover larger segments of a case discussion and together they make up the whole case. Behaviors concern single utterances. The first main categories of teacher behavior codes (T-ANSW, T-QUES and T-ADDS) express mostly teacher utterances in the role of “information provider,” whereas the codes T-PROC, T-GROU and T-EVAL concern the “scaffolding” role. Students' utterances were coded interpretatively (Miles & Huberman, 1994), linking them to (cognitive) activities that make up “clinical reasoning”: gathering, interpreting, and organizing information; establishing and testing hypothesis; drawing conclusions; and making and justifying choices and decisions. To determine the consistency of the coding, a randomly selected proportion (8%) of the recordings was coded independently by two clinical teachers and one research assistant. For the “problem-solving” and “supportive learning” phases, the inter-rater agreement was very good ($K=0.92$), whereas for “teacher behaviors” and “students' reasoning,” it was good ($K=0.75$).

Results

First, an overview will show how a case discussion was made up of the various problem-solving and

Table 1
The Coding Scheme: Main Categories

Problem-solving Phases	Supportive Learning Phases
Initial case information (C-INFO)	Instruction beforehand (E-INFO)
Checking vital functions (C-VITA)	Time-out (E-TO)
Anamnesis (C-ANAM)	Evaluation (E-EVAL)
Initial problem description (C-PROB)	Teacher-guided discussion (E-COLL)
General patient assessment (C-GENA)	
Initial diagnostic hypothesis (C-INIT)	
Specific patient assessment (C-SPEA)	
Differential diagnosis (C-DDX)	
Choice of treatment modalities (C-RX)	
Execution of treatment (C-EXEC)	
Review of effectiveness (C-EFF)	
Teacher Behaviors	Students' Reasoning (Behaviors)
Providing answers (T-ANSW)	Choice of strategy (R-STRAT)
Asking questions (T-QUES)	Gathering information (R-GATH)
Adding statements (T-ADDS)	Organizing information (R-ORG)
Scaffolding the process (T-PROC)	Interpreting information (R-INTP)
Stimulating group interactions (T-GROU)	Making judgments (R-JUDG)
Guiding reflection and feedback (T-EVAL)	Making decisions (R-DECI)
	Justifying judgments and decisions (R-JUST)
	other (R-OTHR)

Note. The behavioral main code categories are made up of three to six subcategories to allow differentiation. For example, the additional statements are divided into case-related, general theoretical and general practical statements.

learning activities and the distribution of teacher and student behaviors. Next, the findings on behavior, interactions, and effects will be presented in the light of the two research questions.

Overview

The procedure that students followed to explore the case was essentially, as intended, similar to the structure and phases of a patient assessment. Figure 1 shows the sequence and relative duration of phases typical of the observed discussions. On average, nearly 70% of the time was spent on the case itself (problem-solving phases); the remaining 30% was used for discussing relevant background information and for reflection and feedback on the way the case had been handled and lessons to be learned (supportive learning phases).

Variations of the above, in particular the duration of phases, could be substantial. To some extent these variations can be attributed to differences between cases. For example, an acute posttraumatic case may require checking vital functions first. A second source of variation results from differences in the progress of students during the course. Whereas information gathering dominated the discussions at the beginning of

the course, students gradually became more selective about the information they required and spent more time relating findings to each other and to their hypotheses, drawing conclusions, and making decisions.

The proportional distribution of the behavioral categories reflects that usually a substantial part of the case discussion was used to gather all relevant information (Table 2a): students asking questions and performing tests to ascertain the information needed to understand the problem in its context; and students testing their diagnostic hypotheses, possibilities, and assumptions. The teachers (Table 2b) provided the requested information and, as necessary, intervened in the process and stimulated students to rethink their choices and conclusions, elaborate on particular issues, or reflect on their approach and results.

The relatively large proportion of justifications by the students fits not only with the instruction to “think aloud,” but also resulted from frequent questions from teachers about related theoretical issues. Nearly 80% of these justifications were teacher-initiated. The coefficients of variance (defined by $SD/mean$) show the relative variation for each category. They indicate that teacher differences were largest in providing unrequested information (additional statements), having

Figure 1
Typical Sequence and Relative Duration of the Various Phases in the Case Discussions

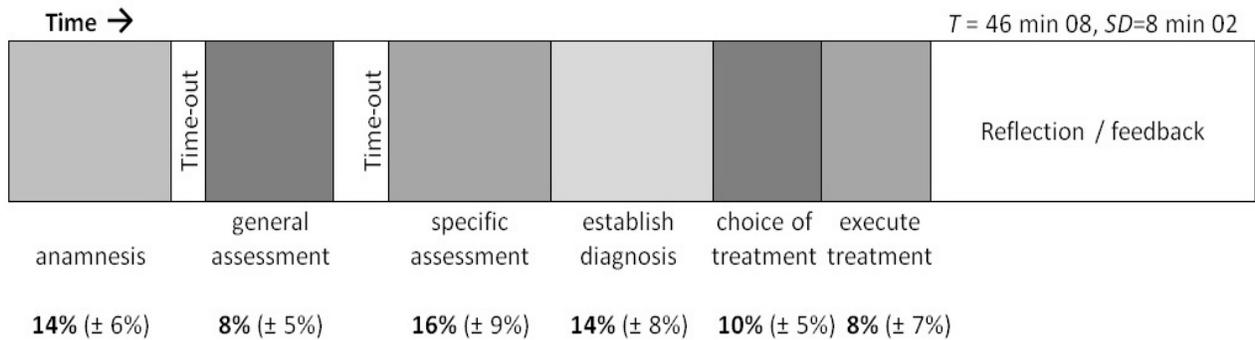


Table 2
Proportional Distribution of the Main Categories of Utterances
M and SD are Expressed in the Average Percentage of Utterances Per Case
(2a. student reasoning, 2b. teacher behaviors)

Student Reasoning	Utterances (in %)			Teacher Behaviors	Utterances (in %)		
	Mean	SD	Coeff. of variance		Mean	SD	Coeff. of variance
Gathering information	49.0	16.0	0.33	Providing answers	49.1	15.8	0.32
Organizing info.	6.9	3.0	0.43	Asking questions	14.3	6.4	0.45
Interpreting findings	7.7	3.6	0.47	Adding statements	12.8	10.4	0.81
Making judgments	5.0	2.5	0.50	Process interventions	10.7	5.7	0.54
Decision making	5.4	2.3	0.42	Group interventions	2.8	2.9	1.04
Justification	14.4	6.1	0.42	Reflection / feedback	10.3	8.2	0.79
Other	2.3	2.0	-				

group interventions, and guiding reflection and feedback. Appendix A contains three fragments from a case discussion transcript illustrating the nature of discussions and teacher–student interactions for the information-providing and scaffolding roles, as well as without any teacher interventions.

Teacher Roles and Behaviors

When focusing on teachers' role fulfillment and teacher–student interactions, the issue of matching the degree of scaffolding with a student's level of self-regulation came to the fore. A high level of self-regulation and a matching level of scaffolding were considered key features of the clinical lessons' design, and their importance were recognized by teachers. In actual practice, however, some teachers frequently exerted influence on the direction of the problem-solving process.

Sometimes the intentions of these interventions were explicit and clear; more often, teachers directed discussions in less obvious ways:

T: Fine, good. I am glad, because my wife thought she [the patient – SR] had a broken jaw. . . .
 Luckily, you did not find anything like that. I am glad because with a broken jaw this calf would have become worthless, wouldn't it?
 S: Well yes, um . . . (case 080516LHD-3A)

Using their information-providing role to influence the course of the discussion was a scaffolding strategy the teachers commonly employed. For example, by referring to a sudden change in the patient's condition, unexpected complications, or an uncooperative owner of the animal, they urged students to speed up their patient assessment, extend their search for possible causal factors and mechanisms, or elaborate on the relevant theoretical issues.

In cross-case analysis of teacher behaviors, two patterns emerged. The main characteristics of both patterns are presented in Table 3. In the first (DS), the fulfillment of the scaffolding role was separated from information provision and delayed until between phases in the problem-solving process. In the second pattern (CS),

teacher roles were executed concurrently, and corrections or directions were provided almost immediately in the process. In this pattern, little or no time was usually spent on reflection and feedback afterwards.

Reasons for Interventions (interview results)

In recall, teachers expressed three grounds for their interventions in specific situations: doubts about the relevance of the particular information students had requested, disagreement with the students' choices or decisions in the case approach and a low work speed. Their intentions when scaffolding were explained in terms of *control* (i.e., checking the students' knowledge), *correction* (i.e., making sure that misunderstandings are corrected), stimulating students to think aloud (i.e., share their thoughts) and stimulating *elaboration* (i.e., raising the discussion to a higher level).

Observed Effects on the Problem-solving Process

On the face of it, the students mostly responded to the teachers as expected: they used the additional case information and adjusted to changes in the case, reviewed or provided reasons for their choices, elaborated on relevant issues, or reproduced the requested theoretical background. In discussions with minimal scaffolding, students themselves initiated a time-out whenever they wanted to reflect on the results of their approach and decide on how to proceed. In cases with a high level of concurrent scaffolding, major changes in the students' problem-solving strategy and reasoning were teacher-initiated.

By and large, student responses did not openly reveal how they valued their teacher's interventions. In three of the observed cases, however, the discussion was visibly affected by a high level of concurrent scaffolding early in the process (pattern CS). In response to these interventions, the students' reasoning apparently lost direction, and the discussion became almost completely teacher-led. A substantial part of the time (nearly 60%) had the character of a micro-lecture and focused on theoretical backgrounds. When trying to return to the case, the students seemed more focused on what they assumed their teachers expected from them than on the case itself; "Well, I guess you would like to hear now a first problem description about this farm?" (case 051011LHD-1A). Afterwards, the students expressed their discomfort with the situation and disappointment.

Students' Appreciation (Questionnaire Results)

To expand the understanding of the observed behavioral patterns and how these patterns affect the students' learning motivation, a questionnaire was used including a number of questions about the fulfillment of

teacher roles, measured at the level of separate case discussions.

On a five-point scale ranging from 1 (disagree) to 5 (agree), the students' overall appreciation of the tutorials was high (authentic problems: $M= 4.43$ $SD= 0.67$; motivating issues: $M= 4.21$, $SD= 0.73$; opportunity to practice clinical reasoning: $M= 4.19$, $SD= 0.70$; perceived learning effect: $M= 4.24$ $SD= 0.70$) and significantly but only slightly less ($\Delta M= 0.12$, $\Delta SE= 0.03$) than for the clinical practicals with real patients. The students expressed that they considered teacher differences in their way of facilitating the tutorials as the main area of anxiety.

The "perceived learning effect" had a positive significant correlation with the quality of the feedback, the amount of time spent on reflection, the transparency of teacher expectations, and the clear switches between the different teacher roles (Table 4, Pearson's r). Its negative correlation with the frequency of scaffolding was also significant but weak. To compare the relative contribution of these variables to the perceived learning effect, multiple regressions were conducted using the forced entry method. The standardized beta coefficients showed the relative largest contribution of "instructive feedback" ($\beta= 0.29$). The model, based on the teacher-related variables, explained 26% of the total variance (adjusted $R^2= .26$). The instructive aspects related to the case characteristics, and the educational format were excluded from the model.

Discussion and Conclusions

The observations revealed no serious drawbacks of the format of combining the provision of information with scaffolding. In general, teachers managed to fulfill both roles and, unlike other studies on facilitating case discussions (e.g., Spronken-Smith & Harland, 2009), they barely expressed dissatisfaction about inefficiencies, the lack of structure in student discussions, underutilization of their expertise, or uncertainty about when or how to intervene. The just-in-time provision of case information created an opportunity to engage students in a process of clinical problem solving in which the availability of information resembles authentic practice and students highly appreciated this.

With regard to the optimal teacher strategies for student support and the identified behavioral patterns, the findings were less unconditional:

- Various definitions and perspectives on scaffolding exist, (e.g., Hmelo-Silver, et al., 2007; Jonassen, 1996), but they commonly share two elements: the provision of *just enough* support to enable students to carry out a task and the *gradual fading*

Table 3
Characteristics of the Two Behavioral Patterns

<i>Pattern CS: Immediate scaffolding, concurrent with provision of information</i>	<i>Pattern DS: Delayed scaffolding, separated provision of information</i>
<ul style="list-style-type: none"> replies to students' questions frequently contain additional information or counter questions, suggesting a direction about how to proceed or what should be covered by the patient assessment teachers use questions and 'micro-lectures' to discuss relevant theoretical issues the case discussion ends with an explanation of the optimal approach by the teacher. Little or no time is taken for reflection and feedback on the students' approach of the case 	<ul style="list-style-type: none"> the provision of information is limited to the information requested by the students interim time-outs are used to scaffold reflection on findings (clarity) and choices about how to proceed (focus) case discussion ends with an evaluative reflection on the content and process and the provision of feedback, containing feed forward for future case(s)

Table 4
Tabulated Results from Multiple Regression

Perceived Learning Effect (<i>n</i> = 1814)	<i>B</i>	<i>SE</i>	<i>β</i>	Zero-order (= Pearson's <i>r</i>)
Constant	2.239	0.113		
Our discussion was frequently scaffolded by the teacher	-0.056	0.016	-0.126 *	-0.074 *
The switches between teacher roles were clear to me	0.116	0.017	0.303 *	0.153 *
The teacher's expectations about me were clear	0.089	0.017	0.265 *	0.122 *
The time spent on evaluative reflection was sufficient	0.116	0.020	0.357 *	0.142 *
The feedback I received was instructive	0.231	0.020	0.431 *	0.290 *

Note. *R* = .51, *R*² = .26, * *p* < .001

of this support. Theoretically, these elements link the effectiveness of teacher support to facilitating a high level of active engagement and self-directedness in thinking and learning activities, as well as to task fulfillment at a near next level that otherwise would be beyond a learner's current capacities. In practice, however, what is "just enough" is difficult to establish and context-bound. Students adrift or a superficial level of discussion might be signs indicating a mismatch between the required and offered level of support, but these were also observed as temporary states in the problem-solving process which students themselves overcame.

- In the concurrent scaffolding pattern (CS), role interactions were regularly observed. To some extent, these interactions fit in the concept of authentic cases. For example, including unexpected changes in the case is not only a way of directing the students' discussion to but also of creating opportunities to practice with handling authentic complications and incidents (Jonassen, 2004). Nevertheless, by exaggerating case dynamics and using similar incidents or

circumstances (e.g., an uncooperative patient caretaker) repeatedly to direct case discussions, teacher interventions became predictable, artificial and less appreciated. As one student expressed: "You are just waiting for the moment something unexpected occurs. With this teacher, you don't know when it is going to happen, just you know that something will happen." (case 070423P-4B)

Taken only from the observed behavioral responses, the students mostly seemed comfortable with the extent of the scaffolding and easily adjusted to the directions offered by their teachers. Under the surface of their immediate responses, however, the discourse in discussions sometimes showed clear differences between the two teaching patterns in favor of delayed scaffolding and feedback (pattern DS):

- From the way they were phrased, immediate teacher interventions appeared to be triggered mostly by disagreement or doubts about the students' approach and an intention to check or correct the students' understanding of certain case aspects. Student responses to these

interventions usually remained limited to brief answers. Interventions to encourage in-depth discussion, explicitly expressed in terms of “think aloud” or “elaborate”, were scarce and used by those teachers who delayed most of their scaffolding and feedback.

- Small disturbances in the course of a discussion typically occurred in situations of immediate scaffolding about complex issues. This finding corresponds with studies concerning feedback when students have to deal with complex issues (Hattie & Timperley, 2007). It has been suggested that such complex issues require greater degrees of processing, and delayed interventions provide an opportunity to do so.
- The three deviant case discussions signified that early and continued interventions resulted in the students focusing on assumed teacher expectations and on “survival”, a mode of student behavior as described in Boekaerts’ dual processing self-regulation model (Boekaerts, de Koning, & Vedder, 2006).

The existence of differences in impact between the two scaffolding patterns is supported by the questionnaire results. Students attributed the effectiveness of their learning from the tutorials to features of teacher behavior that are part of the pattern with delayed scaffolding, reflection and feedback. Differences between teachers, a lack of clarity about their intentions, expectations and role behaviors, and their implicit ways of directing discussions were perceived by students as negatively affecting the reasoning process.

The aim of this study was to disclose how teachers combine the roles that are part of a case-based learning format with the just-in-time provision of information, and how this, in turn, influences students’ reasoning and problem solving.

Regarding the teachers’ role fulfillment, the results from the observations and the questionnaire about separate case discussions support the conclusion that, in most cases, teachers can effectively combine the roles of providing information and scaffolding. When necessary, they provided students with guidance and questioned assumptions or interpretations, and they stimulated students to deepen their analysis, broaden their scope, and relate specific case features to general theoretical notions. Nevertheless, including the just-in-time provision of case-specific information in this instructional format also created additional opportunities to influence the students’ discussions, opportunities some teachers used to direct student discussions beyond the level of scaffolding.

In answer to the second research question: just-in-time provision of case information enabled students to

practice solving clinical problems while obtaining patient information in a timescale that resembles authentic clinical practice. Although the students’ direct behavioral responses to frequent interventions during case discussions were mostly characterized by adaptation, they considered the pattern of delayed scaffolding and feedback more beneficial for their learning. Possible explanations for their willingness to adapt to most ways of scaffolding might lie in an awareness of being assessed as well, positive experiences in most other case discussions or with other teachers facilitating the tutorials, or much appreciation for aspects such as the authenticity of the case, its clinical relevance, and constructive cooperation with their peers.

The findings in this study emphasize that in this instructional format providing clarity on teacher roles and expectations, delayed scaffolding and facilitation of reflection and feedback are conditional for student learning and motivation. Furthermore, as students do not easily show when teacher interventions interfere with their problem solving process, effective teaching requires monitoring the student’s behavioral responses and attending to signs of anxiety.

This study was primarily based on observations, with additional interviews and a questionnaire to confirm or extend the findings from the observations. This methodology, applied to a large number of cases in this study, yields an abundance of qualitative data and, therefore, requires rigorous data organization, focus, and bounding. The scope of this study was limited to the analysis of behaviors, interactions, and effects from the perspective of role fulfillment. Furthermore, the cases were assumed to be of a constant quality, that is, to have more or less a similar impact on teacher behavior and interactions. The third limitation of this study concerns the use of perceived learning as the outcome measure. In doing so, the possibility, for example, that friction in the teacher – student interaction might also have beneficial effects on long-term learning outcomes is ignored. Further studies using outcome measures based on student performances to reveal the effectiveness of teacher behavior on competence development have been taken up and will be reported subsequently.

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Appendix
Sample case discussion (080507 Horse case 2B)

The case concerns a two-day-old foal, which initially seemed healthy but now does not want to drink and prefers lying down [SR].

⌚=03:24

S: You did not expect this foal to be born yet?

T: Well, as a matter of fact we already expected him last week.

S: The last days, did you notice the mare's nipples wax? Perhaps any secretion from the teats?

T: Well, at some point her udder began to swell and already within hours a foal was born

S: No milk leaking before he was born?

T: Not that I have noticed.

S: Not to your knowledge. Did you see her giving birth?"

[. . .]

⌚=18:34

S1: I think this is . . . um . . .

S2: A positive undulation sign and constipation.

S1: Should we carry out some additional assessment tests?

S2: Let's first establish a list of differential diagnostic possibilities, as there are a few things we need to keep in mind. For example a rupture of the bladder does not necessarily lead to apparent clinical signs.

S1: And such rupture could exist besides meconium constipation.

S2: Yes, they could exist next to each other. At least it is not a case of lysis . . . and sepsis seems unlikely, because he would have had fever?

[. . .]

⌚=30:54

T: So, what's next?

S1: It appears to be a persistent case of meconium constipation. We would like to use analgesics, as he is still not drinking and the problem has already existed for quite some time. Also, because the constipation persists, we propose purgative rinsing, more rigorously. For this, we would like to give him paraffin oil, using a stomach tube.

T: which analgesic did you have in mind?

S1: Flunixin. Only then, we would have to use a stomach pulser . . . should we add some other medication? To protect him from side effects?

S2: Well, it will be administered only once.

S1: Okay, just because Flunixin is only used once, we will not add any other drugs.

T: I sense, as the owner of this animal, some doubts about your choice of analgesic. What is it about?"

[. . .]

Meaningful Learning through Video-Supported Forum-Theater

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This paper presents the first cycle of a design-based study at Mikkeli University of Applied Sciences, Finland, during which a video-supported forum-theater approach was implemented and evaluated. Students enrolled in the Drama course in the Civic Activities and Youth Work degree program produced and recorded forum-theater performances about elderly people's use of alcohol, with the recordings used first as learning tools for themselves and later as video cases for social work students enrolled in the Substance Abuse course. The study sought to refine the design of these courses by analyzing the Drama course students' experiences of the video-supported forum-theater approach from the viewpoint of meaningful learning and then the Substance Abuse students' experiences of the video cases. The results indicate that, according to the Drama students, video-supported forum-theater facilitates both teaching and meaningful learning, enhancing the acquisition of domain-specific knowledge, methodological skills, and the ability to solve every day social problems. The Substance Abuse students perceived the video cases as useful for learning. According to students, the videos were authentic and represented working life well. The results suggest several practical refinements to both the Drama and the Substance Abuse course designs and to the teaching activities.

Introduction

One of the challenges facing higher education is to provide students with learning environments in which they gain the experience of working situations that experts encounter. Teaching practices are required which integrate the study of domain-specific knowledge and promote students' ability to recognize, identify, and solve problems (Tynjälä, 2001). In social work education this challenge has been described as the theory/practice dilemma, the problem of readiness to practice, and the problem of integrated learning (Knowles & Ballantyne, 2007). Different pedagogical approaches, such as forum-theater, case-based teaching, and problem-based learning, can and have been used to meet this challenge. Digital video cases can support learning by illustrating real-life problems, triggering discussion, and bringing out relevant issues and tacit beliefs (Schwartz & Hartman, 2007).

This paper presents the first cycle of a design-based study at Mikkeli University of Applied Sciences, Finland, during which a video-supported forum-theater approach was implemented and evaluated. Students enrolled in the Drama course in the Civic Activities and Youth Work degree program produced and recorded forum-theater performances, with the recordings used first as learning tools for themselves and later as video cases for social work students enrolled in the Substance Abuse course. The Drama students produced two video cases which portrayed elderly people's use of alcohol. The study sought to refine the design of these courses by analyzing the Drama course students' experiences of the video-supported forum-theater approach and then the Substance Abuse students' experiences of the video cases. Of special interest was the students' emotional

involvement, which is considered one of the characteristics of meaningful learning in this research.

Literature Review

The Forum-Theater Method in Higher Education

Forum-theater is an interactive technique based on Augusto Boal's Theater of the Oppressed (see Boal, 1979), which has been used worldwide as a tool for community building and organizing for direct democracy (see Picher, 2007). The basic idea of forum-theater is that a problem of current interest can be investigated by means of drama (Boal, 1979, 1992, 1995). The technique seeks to transform people from spectators (objects) into actors (subjects) in their own lives and to make audiences aware of oppressed-oppressor relationships and how the consequences of such relationships can be avoided (Boal, 1979, 1998; Hakemulder, 2007). According to Picher (2007), Theater of the Oppressed "highlights theater not as a spectacle but rather as a learning process that fosters critical thinking" (p. 79).

In a forum-theater workshop, participants first take the role of audience: they are shown a play (performed by actors) in which a central character encounters a situation of conflict involving oppression that s/he is unable to overcome (see, e.g., Seeley, 2008; Picher, 2007). The audience then discusses the central character's strategy for resolving the conflict, and the play is performed for the second time. This time a facilitator prompts the audience to consider the problem from multiple perspectives and to search for different solutions (Boal, 1979). S/he encourages members of the audience to come on stage to replace actors and act out

their own strategies for resolving the conflict (see Picher, 2007).

Imagining oneself in the position of someone else is considered to support learning in several settings, for example, in philosophical thought experiments, in counselling and therapy, and in training programs in which role-play is used (Hakemulder, 2007). Experimental role-playing studies have demonstrated that active involvement in imaginary situations shapes people's attitudes and beliefs, and Hakemulder (2007) has argued that this may apply in the case of forum-theater as well. In addition, Wasylko and Stickley (2003) have proposed that forum-theater supports the development of participants' empathy and emotional intelligence.

Forum-theater has been advocated by several practitioners in a number of initiatives in higher education (e.g., McClimens & Scott, 2007; Wasylko & Stickley, 2003; Humak University of Applied Sciences and project partners, 2006), with the technique being used to support students' transition to university studies and to reflect on tutoring issues with students (see Clerehan, 2003). However, research evidence of the long-term effects of Boal's Theater of the Oppressed on participants' attitudes and actions is still limited (Österlind, 2008; see also Burgoyne et al., 2007).

Among the several case studies in the literature is that conducted by Placier et al. (2005), in which teacher and theater students collaboratively prepared forum-theater scenes portraying oppressive classroom practices that raised issues of equity, social justice, and multiculturalism. Some students experienced forum-theater as an effective method for learning problem solving and for promoting empathy and awareness of oppression. Others, however, reported initial discomfort with acting and a preference for more traditional methods of instruction. In a nursing education program, students responded favorably to the use of drama methods, forum-theater included (Ekebergh, Lepp, & Dahlberg, 2004), with most reporting that the methods helped contextualize the theoretical knowledge in the program and "made it alive" (Ekebergh et al., 2004, p. 627).

Monks, Barker, and Mhanacháin (2001) describe the use and impact of Boal's techniques in management education and development programs that aimed to create a positive attitude toward problem solving by focusing on individual agency and self-empowerment. One of the scenes prepared by the students portrayed a female manager who was trying to negotiate at a large meeting where no one would listen to her. Monks et al. (2001) found drama to be a powerful learning tool, yet one requiring that the right conditions be provided, such as a suitable timetable, an environment for acting, and advance information to the group regarding the types of exercises. Also needed is a trained facilitator who is able to handle challenging and emotional situations.

Video Cases in Higher Education

Case-based multimedia and hypermedia learning materials that include video have been used as tools for teaching and learning in the fields of social work education (e.g., Knowles & Ballantyne, 2007), business, law, medicine (e.g., Elliott & Keppell, 2000; Kerfoot, Masser, & Hafler, 2005; Parkin & Dogra, 2000), foreign language teaching, teacher education (e.g., Brophy, 2004; Hmelo-Silver, Nagarajan, & Derry 2006), architecture, and engineering (McLellan, 2004). Knowles and Ballantyne (2007) examined social work students' perspectives and experiences of problem-based learning (PBL) in a setting that compared multimedia and text-based case scenarios; the research also sought to provide insights regarding the use and reuse of multimedia case studies. The scenario consisted of five video clips illustrating the perspectives of key players in the case, all played by professional actors and filmed by a university film production unit. The results indicated strong support for the use of multimedia case scenarios in social work education in preference to text-based case studies. According to the students, the multimedia case scenario significantly enhanced their learning, and it was more enjoyable, realistic, engaging, and motivating than the text-based one.

The use of video cases in medical education is relevant for the present research. Both in medical education and in the present research, video cases present problematic situations that students may encounter in their future work. The aim of the video cases in both contexts is to promote students' ability to recognize, identify, and solve problems. Problem-based learning in medical education often comprises simulations of patient encounters (Elliott & Keppell, 2000). The simulations may be paper based or draw on the use of various multimedia documents, including audio, graphics, still images, and video. The multimedia documents present and illustrate doctor-patient encounters, the patient's medical history, and the progress or results of physical examinations (see, e.g., Elliott & Keppell, 2000; Kerfoot et al., 2005; Bergdahl, Fyrenius, & Persson, 2006). Videos have been used to portray different kinds of patient encounters, and they have featured staff members, amateur actors and, in some cases, even patients (see e.g., Bergdahl, Fyrenius, & Persson 2006).

The superiority of video- over text-based cases has been demonstrated in previous research on medical education. Balslev, de Grave, Muijtjens, and Scherpbier (2005) investigated whether adding a brief video case instead of an equivalent written text improves the cognitive and metacognitive processes of university hospital residents in a PBL setting. The results demonstrated that a video case prompted more frequent

exploration, theory building and theory evaluation than a text case. The findings of De Leng et al. (2007) indicate that video cases in the pre-clinical phase of undergraduate PBL medical education were generally perceived as a valuable stimulus for group discussions. According to the students, the advantages of video cases were their authenticity, illustrative ability, comprehensiveness, and power to motivate. In addition, students were better able to remember and to apply in practice actions and procedures that they had watched on video.

The use of video cases has limitations, however. De Leng et al. (2007) concluded that productive use depends on specific conditions, one such condition being that cases should be viewed in a structured, purposeful manner, with instructions and prompts to focus attention on essential issues. Previous research on the use of patient video cases has also highlighted the need for video triggers to be as realistic as possible in order to stimulate students' problem solving (Elliott & Keppell, 2000; Boud & Pearson, 1984). Finally, Albanese (2005) argues that the power of video cases may be limited in that they do not automatically apply to novice learners as compared with learners who have already gained clinical expertise. For novice learners, solving a video case may be too complex and realistic a task.

Previous research by Hakkarainen, Saarelainen, and Ruokamo (2007, 2009) indicates that, according to student perceptions, the design and production of video cases in the context of a video-supported case-based teaching approach promotes meaningful learning. In addition, student-produced video cases appear to have played a supportive role in the learning processes of peers who used the videos as learning resources.

In higher education teaching, video production has been combined with forum-theater as a way of creating and promoting dialogue, interaction and understanding between students and different minority groups (see e.g., Humak University of Applied Sciences and partners, 2006). However, previous studies have rarely focused on approaches which integrate video production and forum-theater. In usability studies and inclusive design, Carmichael, Newell, Dickinson, and Morgan (2005) have integrated video production and forum-theater to support designers in achieving empathy with their potential users and in gaining sufficient knowledge about their intended end-users' needs and abilities. Carmichael et al. (2005) commissioned a forum-theater script writer and a professional theater company to produce narrative videos portraying elderly people's experiences of information and communication technologies (ICTs). The results suggest that watching the videos raised applied computing undergraduates' and ICT designers' awareness of older people's special needs.

Students' Emotions in Higher Education Settings

Emotions are an integral but under-researched part of learning (Kort & Reilly, 2002; Pekrun, Goetz, Tizt, & Perry, 2002; Linnenbrink, 2006). In the last 10 to 15 years, however, there has been an increase in research on emotions in educational settings (Schutz, Hong, Cross, & Osbon, 2006). To cite Op't Eynde and Turner (2006), "students' affective processes (e.g., moods or emotions) are no longer treated as the positive or negative side-effects of learning" (p. 362), and, not surprisingly, understanding the interrelations among students' cognitive, emotional, and motivational processes is an emerging focus of educational psychology research (Op't Eynde & Turner, 2006). Theoretical considerations and the existing research evidence suggest that the emotions which students experience in academic settings play a central role in their motivation to learn and academic achievement (Meyer & Turner, 2002; Pekrun et al., 2002; Op't Eynde & Turner, 2006). The relations among motivation, emotions, and cognition are bi-directional and reciprocal, and none of the three factors should be given precedence (see Linnenbrink, 2006).

Forum-theater acknowledges the role of emotions, since it views all five human senses as being linked. In other words, Boal's conception of the interwoven character of emotions and beliefs accords with the current research on emotions in education. The basic problem-solving steps of Boal's theater techniques are seeing, hearing, *feeling*, analyzing, and acting (see Picher, 2007). Hakemulder (2007) argued that the fact that forum-theater participants have the *bodily experience* of actually being in situations unfamiliar to them may boost the effects of forum-theater on participants' learning considerably. The significant role given to emotion in forum-theater can be seen, for example, in the fact that experiencing *empathy* (e.g., Wasylko & Stickley, 2003; Carmichael et al., 2005), *empowerment* (e.g., Monks et al., 2001), and, contrastingly, *fear of powerlessness* (see Picher, 2007) has been considered one of the aims of using forum-theater in educational settings.

Since emotional processes "are very much present and co-directing the learning process", research should raise teachers' awareness of the nature and role of emotions in learning so that they can better organize their instruction and support students' learning (Op't Eynde & Turner, 2006, p. 363). Several researchers have studied emotions from this perspective. Pekrun, Goetz, Tizt and Perry (2002) propose the term "academic emotions" to denote emotions that students experience in school or university settings and "that are directly linked to academic learning, classroom instruction, and achievement" (p. 92). Using samples of university and school students, they concluded that

frequently experienced positive emotions included enjoyment of learning, hope, pride, and relief, whereas frequently experienced negative emotions included anxiety, anger, boredom, and shame. With the exception of relief, positive emotions predicted high achievement, and negative emotions low achievement.

Kort and Reilly's (2002) Four Quadrant Model relates phases of learning to the following six emotion axes: anxiety-confidence, ennui-fascination, frustration-euphoria, dispirited-enthusiasm, terror-excitement, and humiliated-proud. Kort and Reilly argue that a typical learning experience involves a range of emotions, with students' emotions fluctuating dynamically along the emotion axes. The effect of negative emotions on learning is not simply negative: a successful learning process may include occasional negative emotions (Kort & Reilly, 2002; see also Op't Eynde, De Corte, & Verschaffel, 2001; Pekrun et al., 2002). However, Pekrun et al. (2002) have suggested that boredom and hopelessness are "detrimental for students' academic motivation" (p. 99).

Hakkarainen et al. (2007, 2009) studied university students' self-reported emotions in a case-based teaching approach in which students acted out video cases of possible working life situations. These video cases were then used as learning material by their peers in an online course. The results indicated that students in both face-to-face and online modes reported positive as well as negative emotions, although positive emotions were reported as clearly having a higher intensity. The most frequently reported positive emotions were satisfaction, interest, feelings of challenge, and enthusiasm. These emotions were mostly associated with the course topics, a new teaching approach, i.e., case-based teaching and production of video cases, and small-group collaboration. Interestingly, some of the students reported that the new teaching approach, which included scriptwriting and acting, evoked negative emotions of uncertainty and worry.

Method

Research Strategy and Questions

The research was conducted as a design-based research (DBR) process. Following Barab and Squire (2004), DBR was understood as developing, testing, investigating, and refining learning environment designs and theoretical constructs, such as the pedagogical models that support learning and illustrate and predict how learning occurs. This dual goal of meeting local needs and advancing theory is a critical component of DBR (Barab & Squire, 2004; Edelson, 2002; Wang & Hannafin, 2005). According to Wang and Hannafin (2005), the goal of DBR is to generate

pragmatic and generalizable design principles. A DBR process proceeds through iterative cycles of design and implementation, with the researcher using each implementation as an opportunity to collect data to support subsequent design (Edelson, 2002).

The present research focused on ascertaining the students' perspectives on the following research questions:

1. How does designing and acting out social cases for digital videos support meaningful learning for the Drama course students?
2. How do teaching activities support meaningful learning for the Drama course students?
3. How do the videos produced in the Drama course support learning among the Substance Abuse course students?

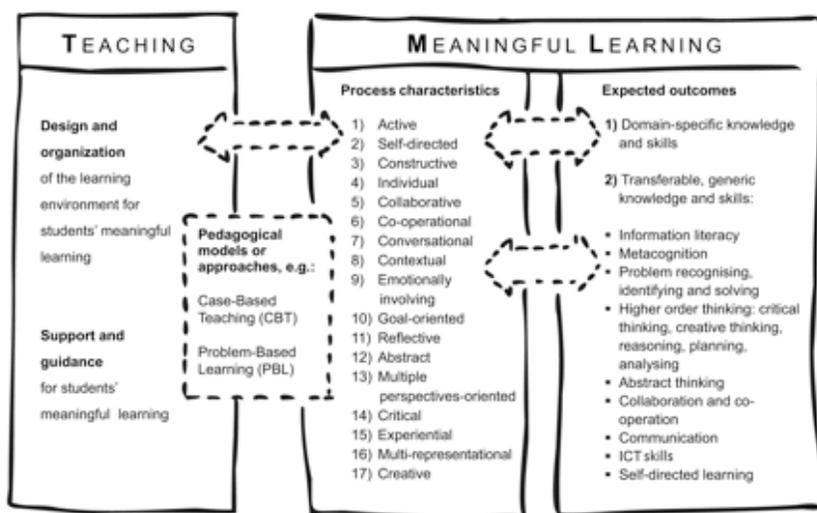
Teaching and Meaningful Learning

The general design and assessment framework used in the Drama course was the pedagogical model for teaching and meaningful learning (TML) (for a more detailed description, see Hakkarainen, 2007, 2009, 2011; Hakkarainen et al., 2007, 2009) (Figure 1).

The TML model defines teaching and meaningful learning in terms of 17 process characteristics and their expected outcomes, which encompass domain-specific and generic knowledge and skills. Teaching activities should provide a learning environment that fosters the realization of the process characteristics of meaningful learning. A central feature of the TML model is the interrelationships of its components: teaching, meaningful learning process and outcomes. No direct causal relationships can be demonstrated between the components: the relationships are reciprocal and conditional, which is indicated in the TML model with dashed two-way arrows.

Anderson, Rourke, Garrison, and Archer (2001) have proposed the concept of teaching presence, by which they mean "design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes" (p. 5). Echoing the work of Anderson et al., the concept of *teaching* in the TML model incorporates a broad view of teaching activities, with these understood to include the design and organization of the learning environment. Support and guidance are needed to prevent students from being overwhelmed, particularly in ill-structured and complex problem-solving activities. Above all, teachers must provide an environment that is safe for the students, that is, one that encourages them to try new things without being punished or belittled (Dunlap & Grabinger, 1996). The TML model conceives

Figure 1
The TML Model



(Hakkarainen, 2007, 2009, 2011; Hakkarainen, Saarelainen, & Ruokamo, 2007, 2009)

teaching as drawing on a variety of activities for designing and organizing a learning environment, and providing support and guidance for students. In the model, teaching and meaningful learning are viewed as processes triggered by various pedagogical models or approaches, such as case-based teaching, PBL, and forum-theater.

In the TML model, meaningful learning is defined in terms of 17 “process characteristics” that may lead to expected learning outcomes. Central to the application of the TML model is that not all 17 characteristics of meaningful learning processes need to be present at any given time. Moreover, the characteristics can be intertwined, interdependent, interactive, partly overlapping, and synergetic. The expected outcomes of the meaningful learning processes in the TML model include: (1) domain-specific knowledge and skills and (2) transferable, generic knowledge and skills such as metacognitive skills, higher-order thinking, and problem-solving (Tynjälä, 2001).

Participants

The first group of participants consisted of 11 first-year students (eight females and three males, aged from 19 to 29) enrolled in the Drama course in the Civic Activities and Youth Work degree program. Seven of them had some experience in shooting and editing digital video as part of their studies. Six students had prior experience in theater production, although none had prior experience in forum-theater. The second

group of participants consisted of 38 social work students (36 females and two males aged from 19 to 51) enrolled in the Substance Abuse course.

Course Descriptions

The research process was implemented during the eight-week Drama course (3 ECTS European Credit Transfer System credits, graded from failed to five points) held in November and December 2008, and during the eight-week Substance Abuse course (5 ECTS, graded from failed to five points) taught in January and February 2009. The course implementations are presented below.

The Drama course. The course is part of a module of compulsory professional studies called Creative and Cultural Methods. The aim of the course is (1) to support students' ability to use the methods related to cultural youth work and (2) to support students' own expressive skills when using creative and cultural methods in education. The students were allowed to choose between two learning projects, one of which was the video-supported forum-theater. The Drama course started with an introductory meeting (two hours) in which students were provided with basic information about the two projects and forum-theater. Eleven students selected the video-supported forum-theater project. The students were asked to design and act out a fictional, but realistic forum-theater dramatization about elderly people's use of intoxicants. The students investigated the topic using sources on the Internet,

group discussions and discussions with the Substance Abuse course teacher. The dramatization had to end with a conflict. The purpose of this was to activate the audience in becoming conscious of the problem of elderly people's use of intoxicants, to discuss ethical ways to behave in such a situation, and to try out different solutions in order to resolve the conflict. Students devised theater techniques (see Oddey, 1994) and forum-theater techniques (Boal, 1992) in designing the dramatizations.

Forum-theater as implemented in the present study involved two modifications of Boal's original ideas. Whereas traditionally participants decide on the topic to be investigated (see, e.g., Boal, 1979, 1992, 1998), in the present study the topic was provided by the Social Work teacher as an example of a current and complex problem. The second modification was that the dramatizations were video recorded for subsequent use as digital learning material by social work students enrolled in the Substance Abuse course. Social work students watched the videos and then wrote essays in response to the problems depicted in them. Therefore, instead of being a forum-theater experience organized for an audience from outside the Drama course, the workshop was conducted more as a learning demonstration in which the students acted as the audience and in addition undertook the role of the facilitator. An additional function of the workshops was to test whether the dramatizations prompted active discussion.

The Drama students produced two dramatizations, nine and twelve minutes in length. Both of the videos portrayed elderly people's use of alcohol in response to the problems of loneliness and of their relatives seeming to have no time for them (Figure 2). The videos depicted these problematic cases without offering any solutions. The video production was realized within nine teacher-led sessions (15 hours), six independent small-group sessions (approximately 10 hours), and two shooting sessions (three hours each). The students managed the entire production process: designing the dramatizations, writing the manuscript, directing, acting, costumes, and staging. The Drama teacher, the Substance Abuse teacher and the second author of this paper guided and supported the students. The actual shooting was done by students from the cultural management program with the help of professional media production services at Mikkeli University of Applied Sciences. One of the Drama course students was involved in the editing process with the media production services. At the end of the project, a final reflection session (3 hours) was organized.

The Substance Abuse course. The course was conducted in January and February 2009. The aims of the course are to enhance students': (1) ability to consider intoxicant addiction from multiple viewpoints;

(2) knowledge and skills in recognizing and encountering clients with intoxicant problems in an ethical way; and (3) knowledge of different preventive and restorative methods in work against substance abuse.

A DVD showing the two peer-produced forum-theater dramatizations functioned as the starting point for the Substance Abuse students. After watching the videos, the students were given 45 minutes to write their individual essays, in which they were asked to define the problems as well as to find and justify solutions to them. The students were given question prompts (see Jonassen, 1997; Ge & Land, 2003) such as the following: How would you define the problem you saw on the DVD? Why do you think it is a problem? What would you do as a social worker in the situation presented? Do you see any alternative solutions to the problem? The essays did not affect students' grades, which were based on exams and other assignments.

Data Collection and Analysis

The data were collected through two questionnaires. The Drama students ($N = 11$) completed the first questionnaire anonymously during the final reflection session (for a description of the design process of the questionnaire and its previous uses, see Hakkarainen et al. 2007, 2009; Hakkarainen, 2009). The questionnaire included six items relating to students' demographic variables: gender, age, the year they began their studies at the applied university, and previous experience with producing theater, forum-theater, and videos. Three questions focused on what learning activities they participated in and what kind of independent knowledge acquisition they engaged in.

Practical implementation of the TML model was measured using a set of 47 question prompts, which the students were asked to evaluate on a five-point Likert scale (1 = disagree, 2 = moderately disagree, 3 = neither disagree or agree, 4 = moderately agree, 5 = agree). Seven question prompts focused on the teaching component of the TML model, that is, on teachers' support and guidance activities (see Table 2). These question prompts were formulated on the basis of the coding scheme for teaching presence in e-learning used by Anderson et al. (2001). Forty question prompts were formulated to operationalize the process characteristics and outcomes of students' meaningful learning. Table 1 presents the question prompts that we have analyzed for this paper.

Twenty-one question prompts focused on students' emotions. The students were asked to indicate to what extent (0 = not at all, 4 = to a great extent) they had experienced a given emotion during the course and to state what, in their view, had evoked the emotion. Twelve of the twenty emotions appearing on the

Figure 2
Still Images from the Videos



questionnaire were chosen from those proposed by Kort and Reilly (2002) as possibly relevant to learning: worry, comfort, boredom, interest, frustration, uncertainty, dispiritedness, disappointment, satisfaction, enthusiasm, tension, and embarrassment. To these we added three social emotions relevant to collaborative learning – trust, sense of community, and irritation – as well as joy, stress, relief, feelings of inadequacy, and challenge. Out of the twenty emotions appearing on the questionnaire, four – joy, relief, boredom, embarrassment – have been identified by Pekrun et al. (2002) as frequently experienced academic emotions.

The questionnaire also contained five closed- and open-ended questions focusing on students' experiences of the video production process. Questionnaire data were analyzed quantitatively in terms of means, frequencies, and percentages, and qualitatively through content analysis of the open answers. As this was a case study that did not seek statistical significance, quantitative analysis was applied as a tool for describing and interpreting the data.

The second questionnaire ($N = 32$), which comprised 15 items, was completed anonymously by the Substance Abuse students in their reflection session at the end of the course. We will present the results of six items focusing on students' perceptions of the video. Two of these items focused on students' perceptions of the usefulness of the videos in learning, while two focused on students' willingness to use or produce equivalent videos in the future. These four items all included a closed question as well as an open space for justifying the answer to the closed question. The remaining two items were open questions, an essay question about students' emotions while watching the videos, and a question about the technical quality of the video.

Limitations

This study has limitations. The highly positive emotions reported by the students may be explained in part by the novelty of both the topic and the method.

Moreover, the research questionnaires did not include the emotion of empathy, which would have been a well-grounded addition considering the aims and effects of forum-theater (see, e.g., Wasylo & Stickley, 2003; Carmichael et al., 2005; Placier et al., 2005).

The research data presented in this paper describe only students' *experiences* of their learning processes and outcomes. Obtaining a more valid picture of students' learning would have required additional data sources, such as video and audio data from the Drama students' small-group sessions, as well as the Drama students' performance results (videos and essays produced by students) and interviews.

Results

Support for Drama Students' Meaningful Learning

Table 1 presents questionnaire data on student perceptions of how meaningful learning processes played out in practice. The data indicate that digital video-supported forum-theater supports meaningful learning processes, especially the collaborative, co-operational, conversational, experiential, individual, self-directed, multiple perspectives-oriented, constructive, creative, critical, and active characteristics; 46 to 100% of the respondents agreed or moderately agreed with the statements focusing on these characteristics. Interestingly, with respect to the individual characteristics of learning, students rated the following two statements favorably: "I was able to apply my own practical experiences during the project," ($M = 4.55$, $SD = 0.52$), and "It was possible for me to study according to my own personal style that suits me," ($M = 4.18$, $SD = 0.87$). However, the statement, "Studying in the project enabled the achievement of my personal goals," had the lowest mean value in these data ($M = 3.55$, $SD = 0.69$), with only 46% of the respondents agreeing or moderately agreeing with this statement.

In contrast, the students indicated in their responses that the reflective ($M = 3.82$, $SD = 0.75$), abstract ($M = 3.82$, $SD = 0.98$), multi-representational ($M = 3.73$, $SD = 1.01$), and goal-oriented ($M = 3.55$, $SD = 0.69$) aspects of meaningful learning were not fully realized; 46 to 64% of the respondents agreed or moderately agreed with the question prompts focusing on these characteristics.

Students were also asked to assess how different course activities had supported their learning. They were not convinced that working on the topic through small-group, teacher-led discussions and independent knowledge acquisition supported their learning ($M = 3.90$, $SD = 0.57$). Furthermore, they only moderately agreed that their learning was supported by the articles and materials provided to them during the project ($M = 4.09$, $SD = 0.94$).

All of the students reported that the video production added value to the project. Two students specified that producing the dramatizations for video made them really think about the topic. For three students, the fact that the videos were produced for a real purpose added value. The questionnaire also asked the students how it felt to produce learning material for other students. Only one of the students reported not having thought about it at all, while ten students mentioned that it felt "great," "exciting," "fun," "rewarding," "very nice and challenging," "new," and even "pretty funny, us being amateurs and not good at acting." Overall, the students reported a highly positive emotional involvement in learning (Figures 3 and 4).

The mean values of the ratings (0 = not at all, 4 = to a great extent) showing positive emotions were clearly higher than those indicating negative emotions. The students reported that their most intensely positive emotions were enthusiasm ($M = 3.91$, $SD = 0.30$), joy ($M = 3.73$, $SD = 0.47$) and interest ($M = 3.70$, $SD = 0.48$). The novel and interesting topic and the forum-theater approach were identified by students as principal sources for these emotions. Small-group collaboration was cited by seven students as the principal source of the intense feelings of trust. In addition, students gave relatively high ratings ($M = 3.55$, $SD = 0.69$) for the sense of community they experienced.

The intensity of negative emotions reported by the Drama students was very low, with mean values of students' ratings ranging from 0.09 to 2.00. Of the negative emotions (Figure 4), tension ($M = 2.00$, $SD = 1.18$), stress ($M = 1.73$, $SD = 1.27$) and frustration ($M = 1.55$, $SD = 1.04$) exhibited the highest intensity. Three students mentioned that producing the videos and acting had caused some tension. Six students cited the following reasons for having experienced stress: changes made to the forum-theater dramatization at a very late production stage, the tight schedule, and many projects going on simultaneously in their studies. Ten respondents cited the following reasons for having experienced some frustration: difficulties in memorizing lines, normal "setbacks," not being as good as they would have liked, changes in the plans, not making enough progress at times, and receiving many different instructions.

All of the students agreed or moderately agreed that they learned about collaboration, acting and forum-theater as a genre. Between 82 and 91% of the students agreed or moderately agreed that they had learned video production and problem-solving skills and improved their knowledge of the topic of the dramatizations, that is, elderly people's use of intoxicants. Two statements in the questionnaire dealt with the transferability of learning outcomes. Eighty-two percent of the students agreed or moderately agreed with the following

Table 1

Drama Students' (N = 11) Ratings of the Practical Realization of Meaningful Learning process

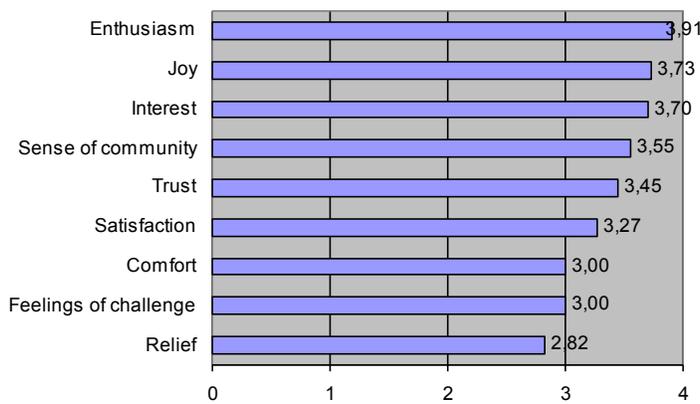
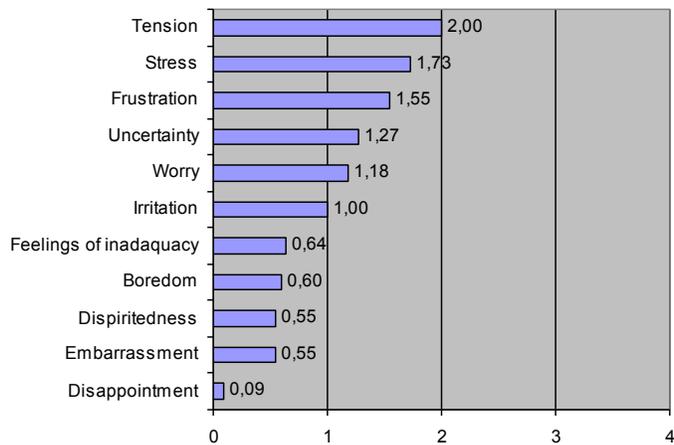
Process characteristic of meaningful learning	Mean value	Standard deviation	Neither disagree or agree %	Moderately agree or agree %	Question prompts focusing on the process characteristic 5-point scale: 1 = disagree, 2 = moderately disagree, 3 = neither disagree or agree, 4 = moderately agree, 5 = agree
Collaborative	4.73	0.47	0.0	100.0	The students were committed to collaboration.
Co-operational	4.45	0.69	9.1	90.9	The independent small group work outside the face-to-face teaching sessions helped me to learn.
Conversational	4.45	0.69	9.1	90.9	The studying developed my collaboration and communication skills.
Experiential	4.55	0.52	0.0	100.0	I was able to apply my own practical experiences during the project.
Individual	4.55	0.52	0.0	100.0	I was able to apply my own practical experiences during the project.
	4.18	0.87	0.0	90.9	It was possible for me to study according to my own personal style that suits me.
	3.55	0.69	54.5	45.5	Studying in the project enabled the achievement of my personal goals.
Self-directed	4.45	0.69	9.1	90.9	I was able to influence the content and realization of the project.
	3.82	0.75	36.4	63.7	I was able to evaluate my own learning during the project.
Multiple perspectives-oriented	4.36	0.51	0.0	100.0	The project helped me to understand different perspectives related to the topics under study (forum-theater, video production, elderly peoples' use of intoxicants).
Constructive	4.36	0.67	9.1	91.0	I was able to utilize my prior knowledge about the topics of the project.
	4.18	0.87	27.3	72.8	The project deepened my understanding of what I had learned before.
Contextual	4.18	0.87	27.3	72.8	The cases handled during the project promoted the learning of skills and knowledge needed in working life.
Creative	4.18	0.98	9.1	81.9	Our video assignment enabled creative thinking.
Critical	4.09	0.70	18.2	81.8	The studying developed my critical thinking skills.
Active	4.00	0.89	36.4	63.7	Students' role in the project was to actively acquire, evaluate, and apply information.
	3.64	0.67	45.5	54.6	The studying developed my skills in acquiring and evaluating knowledge.
Reflective	3.82	0.75	36.4	63.7	I was able to evaluate my own learning during the project.
Abstract	3.82	0.98	27.3	63.7	In the project, practical examples were studied in a theoretical framework.
Multi-representational	3.73	1.01	36.4	54.6	The learning materials utilized during the project were presented in multiple forms.
Goal-oriented	3.55	0.69	54.5	45.5	Studying in the project enabled the achievement of my personal goals.

Table 2
Drama Students' (N = 11) Ratings of Teaching Activities

Question prompts on the questionnaire focusing on teaching activities	Mean value	Standard deviation	Neither disagree or agree %	Moderately agree or agree %
Teachers supported my learning process and learning outcomes significantly by:				
giving advice on questions related to the subject matter of the course	4.55	0.69	9.1	90.9
setting positive climate for learning	4.36	0.67	9.1	91.0
providing feedback that focused on matters relevant to the project	4.36	0.51	0.0	100.0
designing clear project guidelines for the project	4.00	0.78	27.3	72.8
providing individual feedback about my progress	3.91	0.70	27.3	72.7
formulating clear project goals and objectives	3.91	0.54	18.2	81.8
providing feedback and advice in a sufficiently timely manner	3.91	0.70	27.3	72.7

5-point scale: 1 = disagree, 2 = moderately disagree, 3 = neither disagree or agree, 4 = moderately agree, 5 = agree

Figures 3 and 4
Mean Values of the Drama Students' (N = 11) Ratings of Negative and Positive Emotions (0 = not at all, 4 = to a great extent)



statement: “I can utilize what I learned in the course in other situations,” ($M = 4.27$, $SD = 0.79$), and 73% agreed with the statement “Cases under study supported the acquisition of knowledge and skills needed in working life,” ($M = 4.18$, $SD = 0.87$).

Teaching Activities

Table 2 presents the questionnaire data pertaining to the practical realization of teaching activities. Between 73 and 100% of the respondents agreed, or moderately agreed, with these statements focusing on the teaching activities. This clearly indicates that most perceived the teaching activities positively. However, the students were not quite convinced that the teachers had supported their learning significantly by “providing individual feedback about my progress,” ($M = 3.91$, $SD = 0.70$) and “providing feedback and advice in a sufficiently timely manner,” ($M = 3.91$, $SD = 0.70$). In addition, students were not unanimous in their assessment of how the teachers had formulated the project goals, objectives, and guidelines.

Social Work Students’ Perspectives on the Peer-produced Videos

Of the respondents, 94% ($N = 30$) agreed that the videos were useful in learning to solve everyday problems in their future work. In the space provided for the purpose, 29 of the respondents specified the reasons for this. The videos supported contextual characteristics of learning crucial to meaningful learning because, according to the students, they presented realistic working life situations. In their answers, 16 out of 32 respondents stated that the video represented working life well, as indicated in the following remarks:

- “The situations seemed real” (Student 8).
- “The situations were similar to those which social worker will encounter in his/her work” (Student 18).
- “The situations were realistic and there are a lot of elderly people, so surely one has to solve those kinds of situations” (Student 21).
- “They covered a very common problem that is discussed too little” (Student 26).

Five respondents assessed the usefulness of the video from the perspective of their own learning:

- “Afterwards thought about the situations and their solutions” (Student 5).

- “[I was able to get] a little foretaste of this job, when I haven’t got any experience about anything” (Student 13).
- “[I was able to get] some idea about reasons behind elderly people’s substance abuse” (Student 16).
- “At least I got to know that kind of situations” (Student 19).
- “[The situations] taught me to encounter (made it easier) different kinds of substance abusers” (Student 30).

Some students mentioned “illustrativeness” as a value of the videos, as illustrated by the following: “Videos are always nice. At least, I myself learn best by seeing (visuality)” (Student 19). The videos provided students with “concrete” and “realistic” situations:

- “It is easier to learn and understand things when you have something concrete like videos” (Student 21).
- “[The videos] showed snapshots of real situations from everyday life, so it was not just lectures” (Student 8).

In light of the abstract characteristics of learning, it is interesting that only two of the respondents believed that the video illustrated theoretical viewpoints (cf. Ekebergh et al., 2004):

- “They illustrated theory” (Student 18).
- “[They demonstrated] practice in the middle of theory” (Student 27).

The reason for the lack of such responses may lie in the fact that the students were only just beginning their studies (first semester), and thus their skills in integrating theory and practice were not yet very developed. One student expressed this by saying: “More thoughts would [sic] surely appear when the theoretical knowledge will [sic] increase” (Student 32).

In the TML model, students’ emotional involvement in learning is seen as a central characteristic of a meaningful learning process (Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009). Accordingly, students were also asked through an open question to report how they felt about watching the videos and writing an essay about them. Thirty-one percent ($N = 10$) of the respondents took a positive stance and replied that it felt “fairly good,” “fairly educative,” “fairly nice,” “interesting,” and “pleasant.” Another 31% stated that it was “okay,” “interesting,” “pleasant,” but that writing the essay was challenging and too little time was provided for it. One of the

respondents in this group stated that essay-writing in itself was perhaps not the best learning task for the situation:

Instead of writing I would have wanted to solve this problem, for example, through small group conversations, and I think that would be a more working life centered operation model, to discuss things together. The rapid analysis of the situation (that is, writing on paper) 'locked me up' a little bit, and after this I felt a bit uncertain. (Student 31)

Twenty-two percent (N = 7) were of the opinion that too little time was provided for writing the essays, which made the task challenging; as one student expressed, "Writing [the essay] straight after watching the video was a pretty 'bad' thing. More time for thinking should have been given. Coming up with alternative solutions would have required more time, too" (Student 2). Thirteen percent (N = 4) stated that the essay writing was difficult: "Tricky" (Student 27) and "Quite difficult situations. They felt pretty challenging and at one point I got the feeling that I'm not able to answer anything reasonable yet" (Student 9). Of those two students stated that discussion of the solutions to the problems would have been easier and more useful than writing the essay.

When assessing the quality of the technical realization of the video, all but one of the students who answered this question took an overall positive stance, stating that the videos ranged from "fairly okay" to "very successfully done." However, although indicating a generally positive reaction, seven students reported that the quality of sound was poor and at times inaudible, and seven students commented on the poor quality of either staging or acting.

Most of the students – 28 of 32 – answered that they would be willing to write problem-solving essays about the cases on the videos. Many (N = 12), however, set some conditions for their readiness to participate, most pertaining to the limited time provided for writing. The other conditions stipulated were interesting cases, no effects on course grades, grounding in the theory before the writing, more detailed information about the meaning of the essays, group work, and feedback sessions. The feedback discussion was in fact organized at the end of the course, but clearly it should have focused more on solving the problem. Two students justified their unwillingness to participate by saying that this type of study was too challenging or unsuitable for them.

Discussion

The results of this study show that the Drama students (N = 11) either agreed or moderately agreed

that designing and acting out social cases for digital videos supported most of the process characteristics of meaningful learning investigated in this research, including students' emotional involvement. According to the students, the video-supported forum-theater promoted most clearly the collaborative, co-operational, and conversational characteristics of meaningful learning (see Jonassen, 1995; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009). This is no surprise, considering that forum-theater has mainly been used as a tool for community building (see Picher, 2007; Schutzman & Cohen-Cruz, 1994). Students' self-reported emotional involvement was clearly positive: enthusiasm, joy, interest, and sense of community were the most intensely experienced emotions. This is an encouraging result from the point of view of academic achievement, since positive emotions predict high achievement (see Pekrun et al., 2002). However, students also reported negative emotions, albeit low in intensity. These included tension, which for some students was associated with acting (see also Placier et al., 2005).

The results suggest several practical refinements to the Drama course design and to the teaching activities. To better promote the reflective and goal-oriented characteristics of meaningful learning (see Jonassen, 1995, 2000; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009), the course teachers should support students in setting their own learning goals and reflecting on their achievement in online or face-to-face settings. To promote the abstract characteristics of meaningful learning, the course teachers should support students' knowledge acquisition about the topic such that their knowledge reaches from the level of their practical experiences to a more abstract and theoretical level (see Lehtinen, 1997; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009). One way to achieve this could be to integrate a writing assignment, e.g., a reflection paper, or content-specific visualization techniques, e.g., concept mapping (see Fischer, Bruhn, Gräsel, & Mandl, 2002), to the course. The students reported that instructions and goals were sometimes unclear, which caused frustration. Clarifying the project goals, objectives and guidelines at the beginning should thus be a priority.

The Substance Abuse course students perceived the videos produced in the Drama course as useful for learning: 94% of the students agreed that the videos were useful in learning to solve everyday problems in their future work. The results confirm the previous research on video cases in PBL contexts (Knowles & Ballantyne, 2007; De Leng et al., 2005) in that students perceived the video cases as authentic and illustrative. In Substance Abuse, students' perceptions of the video cases indicate that the cases supported the contextual characteristics of meaningful learning. Contextual

learning resorts to learning tasks that are either situated in meaningful, real world tasks, or simulated through a case-based or problem-based learning environment (Jonassen, 1995, 2000). However, there is a need to refine the learning task (i.e., essay) that the students were asked to do after seeing the video cases. More time should be allocated for writing and to support the collaborative, co-operational, and conversational characteristics of meaningful learning (see Jonassen, 1995; Hakkarainen, 2007, 2009; Hakkarainen et al., 2007, 2009), and further opportunities should be provided for collaboration and conversation.

The courses that this study focused on require many types of collaboration: between teachers, between students and between students and teachers. Presently, diverse and complex learning environments, which require teachers to orchestrate different forms of class coordination (see Dillenbourg, Järvelä, & Fisher, 2009), are preferred over single teaching sessions. Teachers need to improve their skills in orchestrating multiple activities, groups, and media related to these kinds of technologies and learning projects. Instead of working alone, teachers need to collaborate with other teachers, students, and staff. This collaborative culture is important for higher education, because it will enhance the skills required of students in their future workplaces.

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Can Co-Curricular Activities Enhance the Learning Effectiveness of Students?: An Application to the Sub-Degree Students in Hong Kong

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A total of 575 students from the Associate Degree Foundation Program and the Associate Degree Program participated in this study. The two purposes of this study were to use the time series between/within experimental design to examine whether participation in co-curricular activities could (1) enhance student learning effectiveness and (2) have positive effects on the academic performance of self-funded sub-degree students in Hong Kong. It was found that participation in co-curricular activities could not enhance student learning effectiveness. Associate degree students were too preoccupied by the need to attain good academic results in the first 2-3 terms of study. Rather, this study suggests that student learning effectiveness is affected by the time factor. High learning effectiveness was observed in the middle of the academic year but relatively low learning effectiveness at the end of the year.

Introduction

The post-secondary education sector in Hong Kong underwent rapid growth in the past decade.¹ Notably, in large part due to the attempt of the government to boost the quantity of graduates with degree or sub-degree qualifications to meet the fast-changing skills needs of a knowledge-based economy, a number of self-funded community colleges were set up to provide a wide range of sub-degree and top-up degree programs. These new community colleges emerged to play a key role, especially in the privately-funded tertiary education sector.^{2,3}

The self-funded sub-degree sector expanded sharply, and the number of community colleges and associate degree students increased from only 3 and 3,732 in 2001 to more than 10 and 23,300 in 2010

respectively (Hong Kong Government, 2010).⁴ Despite the success in developing sub-degree graduates on a privately-funded basis, concerns were expressed over the quality of these community colleges and their programs. Especially, the quality of programs might be compromised in part due to the limited financial resources, as their majority (if not all) of finance was from tuition fees, and the support from government has so far been limited to the land grant and related campus development loans only. There might not be enough funding or resources to support the required student development and other teaching and learning quality enhancement activities to facilitate the all-around development of students, as compared to the government-funded programs in particular. In this regard, the government set up the Quality Enhancement Grant Scheme (QEGS) to fund worthwhile non-work projects or initiatives dedicated to enhancing the quality of teaching and learning of self-financing post-secondary programs. A total of HK\$100 million was made available for such purpose for a period of three years. Among other sub-degree providers, the College of International Education, Hong Kong Baptist University was awarded the QEGS grant to support a one-year project to organize various co-curricular activities with a view to enhancing the learning effectiveness of sub-degree students.

Since recognized co-curricular activities under the supervision of an institution can take place in both regular class time and after school, they provide students with the opportunity to integrate skills acquired with actual experience (Scales & Taccogna, 2000). Learning can take the form of site visits, talks, shows, and competitions, etc. Although schools are concerned with the students' sufficient development in both academic and social

¹ The Government provides the following forms of support to self-financing institutions who are non-profit-making and providing full-time accredited post-secondary programs – (a) start-up loan; (b) land at nominal premium (including vacant school premises at nominal rate); (c) quality enhancement grant; (d) accreditation grant; and reimbursement of government rents and rates.

² The review of the education system began in early 1999 and was completed in September 2000 (Hong Kong Education Commission, 2000). In the Policy Address, the Chief Executive set the target of providing 60% of senior secondary school leavers with tertiary education within next ten years. Among which, some 12 to 13% of tertiary places were still government-funded, and the remaining places were to be offered by self-financing 'Community Colleges'. This policy target was achieved in the 2005/06 school year (Hong Kong Education Commission, 2006).

³ Community colleges in Hong Kong refer to those education institutions that perform one or more of the following functions: (a) providing learners with an alternative route to higher education which, to a certain extent, correlates with university programs; (b) providing a second opportunity to learners who have yet to attain qualifications at secondary level through formal education; and (c) providing a variety of learning opportunities to assist individual learners to acquire skills and qualifications to enhance their employability (Hong Kong Government, 2010)

⁴ The perspective of higher education in Hong Kong is fully discussed in the following links:
http://www.ipass.gov.hk/eng/support_insti.aspx;
http://www.hku.hk/caut/new1/cr/higher_education_uk1.htm#wp

aspects, somehow more attention has been given to their academic performance. This has been reflected in numerous researches in the past ten years, which found that co-curricular activities played an important role in students' academic success (Chambers & Schreiber, 2004; Huang & Chang, 2004; Hunt, 2005; Stephens & Schaben, 2002; Tan & Pope, 2007). However, there are not many studies investigating the relationship between co-curricular activities and student learning effectiveness.

Learning effectiveness is defined as the psychosocial factors affecting students' academic performance and outcomes, such as academic self-esteem, efficacy, and confidence (Chemers, Hu, & Garcia, 2001; Friedlander, Reid, Shupak, & Cribbie, 2007; Zajacova, Lynch, & Espenshade, 2005); time utilisation (Lahmers & Zulauf, 2000; Nonis & Hudson, 2006); strategic organization and study (VanZile-Tamsen, 2001); stress and emotional factors (Davidson & Beck, 2006; Pritchard & Wilson, 2003); student involvement in campus life (Anaya, 1996; Cooper, Healy, & Simpson, 1994); motivation and task relevance (Bong, 2004; VanZile-Tamsen, 2001), and communication in the classroom (Cayanus, 2005; Cunconan, 1996). Effective learning can help students survive more successfully in college, both academically and psychologically.

Though conceptually sound, empirical evidence on the relationship between co-curricular activities and academic performance is rather inconclusive so far. Numerous researches found a positive correlation between them (Hanks & Eckland, 1976; Camp, 1990) whereas some reported no such correlation (Light, 1990; Hartnett, 1965). Holland and Andre (1987) and Otto (1982) noted that the strong positive results reported so far might have been caused by the flawed use of cross-sectional research designs and inadequate or nonexistent selection control methods. The results are inconsistent in many of the cross-sectional studies, and the literature on this topic is inconclusive either. Hunt (2005) suggested using longitudinal designs to treat the variables at one time point as a possible cause and at a later time point as a possible effect.

Against this background, the present study attempts to apply a time series experimental design to examine whether co-curricular activities boost the learning effectiveness of self-funded sub-degree students by comparing learning effectiveness and academic performance between an experimental group (those participated in co-curricular activities) and a control group (without participation in co-curricular activities) at three time points: the beginning of the academic year (October), the middle of academic year (February) and the end of academic year (May). Equally important, the relationship between co-curricular activities and students' academic performance will also be investigated.

Literature Review

Student Involvement Theory

Student involvement refers to the quantity and quality of physical and psychological energy that students engage in college experience. Such involvement can take many forms, such as absorption in academic work, participation in extracurricular activities, and interaction with faculty and other institutional personnel. Importantly, the more the student's involvement in college activities, the greater will be the student's learning and personal development (Astin, 1999).

Astin's Involvement Theory

Astin studied and wrote extensively in the area of student involvement in higher education (Astin, 1968, 1975, 1984, 1985, 1987; 1993; Astin, Korn & Green, 1987). Astin referred to the academic experience in a broad sense that encompassed both classroom learning and out-of-class experiences.

Astin's theory was predicated on five basic assumptions:

1. Involvement refers to the investment of physical and psychological energy in various objects.
2. Involvement occurs along a continuum.
3. Involvement has both quantitative and qualitative features.
4. The amount of student learning and personal development associated with any educational program is directly proportional to the quality and quantity of student involvement in that program.
5. The effectiveness of any educational policy or practice is directly related to the capacity of that policy or practice to increase student involvement (Astin, 1984, p. 298).

Astin's theory presented a paradigm for viewing student participation in co-curricular activities, stressing the concepts of commitment and time. Involvement was an active concept that required the student to invest time and energy. Programs that motivate students to make such a commitment were the most successful.

Co-curricular Activities

Co-curricular activities are defined as those activities that enhance and enrich the regular curriculum during normal school days. They are also referred to as extra-curricular, extra-class, non-class, school-life, and student activities (Tan & Pope, 2007). Despite the lack of a precise term, co-curricular activities seem more

student-centred than the regular classes. In co-curricular activities, students assume responsible positions of leadership; students' spontaneous interests and immediate needs determine affiliations and experiences; and the teacher-supervisor is often a mentor or guide rather than an instructor (Stevens, 1999).

Students Involvement in Co-curricular Activities

New Undergraduates

The success in the first year of college study depends on whether students are able to connect academically and socially with the institution. Gardner and Siegel (2001) cited data from ACT which indicated that 28% of students in public four-year colleges and universities failed to continue beyond their first year in college. Underprepared students in general lacked the ability to compete with other students in the same institution (Ender & Wilkie, 2000). Central to this readiness issue is "the scope of difference between high school and college--level work in terms of pace, amount, and expectations" (Steele & McDonald, 2008, p. 171). Banta did a three-year longitudinal study following undergraduates through their college life, learning experiences, adjustment issues, and social experiences before and after participating in co-curricular activities at Virginia Commonwealth University (VCU). The results indicated that students became more receptive to ideas and more accepting of people from different backgrounds. They approached studies more seriously in subsequent years than they had in their first year (Banta & Kuh, 1998).

Second-Year Students

When compared, capable students tend to be more participative in co-curricular activities than less capable ones. Among other possibilities, they do not have to worry as much that participation in co-curricular activities might take up their time and cause distraction and hence hinder their school work. They believe that they have more buffer with their academic results which allows them to participate more than those students who are struggling in study (Hunt, 2005).

Besides, high-performing students participate more in co-curricular activities because they believe that participation in such activities can enhance their credentials. They may also attempt to ingratiate themselves with the teachers sponsoring the specific activity as well as with other teachers who might grade their other course work or write letters of recommendation (Hunt, 2005). These students seem to know well how the co-curricular activities can enhance

their learning effectiveness, credentials for college, and future career prospects.

Numerous studies have indicated that successful survival in college could well be the result of effective learning, (Chemers, Hu, & Garcia, 2001; Davidson & Beck, 2006; Friedlander, Reid, Shupak, & Cribbie, 2007; Lahmers & Zulauf, 2000), which could be enhanced through co-curricular activities (Engle, Reilly, & LeVine, 2003; Tovar & Simon, 2006; Trombley, 2000; Yeager, 2008).

The Gender Factor

Pascarella and Smart (1991) indicated that "net of other factors, intercollegiate athletic participation has a positive impact on social involvement during college, satisfaction with college, interpersonal and leadership skills, and motivation to complete one's degree" (p. 127). In addition, participation in intercollegiate athletics was found to have a modest positive effect on academic achievement. However, the study only looked at male student-athletes, ignoring nearly 50% of the total student-athlete population.

Finkenberg (1990) conducted a study of the effect on college women's self-concept and participation in a Taekwondo program. The overall result of participating in the martial arts training program showed a significant positive difference on a total self-concept score and on subscale scores measuring their perception of physical self, personal self, social self, identity, and self-satisfaction.

The above studies indicated that the participation in co-curricular activities has positive impact on personal development for both genders. The following section would discuss how the cocurricular activities promote students' personal development.

Chickering's Psychosocial Development Theory

Chickering's psychosocial model is the well-known applied theory of student personal development. Chickering (1969) proposed seven vectors along which traditionally aged college students develop, which included: achieving competence (including intellectual, physical, and social), managing emotions, becoming autonomous, establishing identity, freeing interpersonal relationships, clarifying purposes, and developing integrity.

Chickering (1969) stated that of the seven vectors, the first three, achieving competence, managing emotions, and becoming autonomous, related directly to the construct of student success in college and represent central and critical developmental tasks that students must cope with during these years. Chickering noted college students' increased confidence in themselves, as well as "increased trust in their abilities" (Chickering,

1969, p. 34), and he referenced the positive impact of satisfaction on the development of competence. "A sense of competence stemmed from the confidence that one can cope with what comes and achieve goals successfully" (Chickering & Reisser, 1993, p. 53).

Chickering's work suggested five major methods for promoting developmental growth:

1. Engage the student in making choices;
2. Require interaction with diverse individuals and ideas;
3. Involve students in direct and varied experiences;
4. Involve students in solving complex intellectual and social problems;
5. Involve students in receiving feedback and making objective self-assumptions

(Knefelkamp, Widick, & Parker, 1978, p. 27).

Co-curricular programs possess various components of the above strategies. In sum, Chickering's work offered an explanation of the concept of success that takes into account student cognitive (grade point average), affective (self-concept, satisfaction), and behavioral (ability to manage emotions and independence) realms.

Co-curricular Activities and Academic Performance

Participation in co-curricular activities is widely thought to play a key role in students' academic success (Huang & Chang, 2004; Hunt, 2005; Camp, 1990; Stephens & Schaben, 2002), and contribute to bachelor's degree attainment (Tan & Pope, 2007). Students also realize the importance of developing overall competences, by joining co-curricular activities and working collaboratively with their student peers on academic work in order to gain hands-on experience (Fung, Lee, & Chow, 2007). Numerous researches were conducted to investigate this relationship and found that co-curricular activities were positively correlated to academic performance (Hanks & Eckland, 1976; Camp, 1990). Some findings, however, found no such correlation between co-curricular involvement and academic performance (Light, 1990; Hartnett, 1965). One research finding suggested that only an academic curriculum would enhance academic performance (Chambers & Schreiber, 2004). It implied that the participation in some non-academic co-curricular activities might not directly benefit academic performance. Black (2002) suggested that involvement in student clubs and organizations might even distract students from their regular study, and not all activities were of benefit to academic performance. The research results have so far been inconclusive. Among other possibilities, it could be caused by the flawed use of cross-sectional designs and inadequate or non-existent selection control methods (Holland & Andre, 1987; Otto, 1982).

The present study attempts to apply a time series experimental design to examine the cause/effect relationship between participation in co-curricular activities and learning effectiveness. The use of experimental design could manipulate one variable at a time, or statistical analysis becomes cumbersome and open to question. It's also more reliable to use traditional mathematical and statistical means to measure cause/effect result conclusively. In addition, it attempts to investigate how to enhance student learning effectiveness by using co-curricular activities. The quantitative results provide some contextual foreground for the future qualitative studies in similar topics.

Method

Participants

Purposive sampling was used to collect the data throughout the academic year 2009-10 from the College of International Education, a self-financed division of the Hong Kong Baptist University providing various sub-degree and top-up degree programs. Students were required to complete and return the questionnaires in class or during the co-curricular activities. The return rate was reasonably high, from 75.1% to 91.9% in the three collection phases.⁵

A total of 575 students were involved in this study. The mean age was 19.2 years, 50.8% of students were male, and 49.2% were female. While 28.7% of them studied the Associate Degree Foundation Program, 71.3% studied the Associate Degree Program. As regards the latter, 102 students (25.9%) were from Creative Communication, 71 students (17.4%) from Business, 65 students from Marketing (15.9%), and 48 (11.7%) from Tourism and Hospitality Management Concentrations respectively. Importantly, 320 students (55.7%) were assigned to the control group (i.e., they did not participate in any co-curricular activities during the period of study). The experimental group referred to those students who participated in the 3 co-curricular activities under the QEGS projects, namely the "Business Talk Series," and "Remake Aberdeen" and "Ad-Here" simulation competitions. Among the 255 students in the experimental group, 116 (20.2%) joined the "Talk Series," 34 students (5.9%) joined "Remake Aberdeen," 50 students (8.7%) joined "Ad-Here," and another 30 students (5.2%) joined both 'Talk Series' and 'Remake Aberdeen'. The remaining 25 students who joined the activities did not return the questionnaires.

⁵ Phase one: 667 questionnaires distributed to students with 613 returns (return rate of 91.9%); phase two: 598 questionnaires sent to students with 514 returns (86.0%); and phase three: 478 questionnaires given to students with 359 returns (75.1%).

Only 359 students from both the experimental and control groups returned the questionnaires at “all” three collection rounds: 205 students from the control group and 154 students from the experimental group.

Description of Co-curricular Activities Under the QEGS Project

“Business Talk Series”

There were a total of five business talks. Students could enrich their learning experience through their exposure to the real business world. Business professionals were invited to give talks and share their practical experiences on various topics including marketing, management and business environment, etc. Students are also required to write a short paper to reflect on how they had benefited from the program and what they had learned too.

“Remake Aberdeen” Business Simulation Competition

The purpose of this business simulation competition was to provide students with the knowledge and skills on the development of a business plan, as well as the chance to apply them to the real business world. Students were required to design a business plan to revitalize and to redevelop Aberdeen, one of the tourist attractions to foreign visitors in Hong Kong. Students were required to write a business plan and present their proposals to adjudicators who included business professionals from the industry.

“Ad-Here” – Advertising Simulation Competition

This program aimed to provide a platform for students to connect with the mass communication industry and to offer an opportunity to practice communication and advertising concepts and skills in a real-world setting. Participants were required to formulate and present an advertising plan for a real-world product, and this program also involved marketing or advertising professionals from the industry.

Instrument

A self-report questionnaire was used in this study. It consisted of 2 parts: the College Learning Effectiveness Inventory (CLEI) for measuring students’ learning effectiveness, and the demographic data of students, such as gender, age, academic results, program of study, concentration of study and co-curricular activity involvement.

CLEI is an inventory devised by a group of

researchers at the Kansas University (Newton, Kim, Wilcox, & Yeager, 2008). It comprises six scales and 50 questions for measuring the factors that impact on student learning. The six scales include academic self-efficacy (ASE), organization and attention to study (OAS), stress and time press (STP), involvement with college activity (ICA), emotional satisfaction (ES), and class communication (CC). This inventory approach was modified by Russell and Petrie (1992), who stated that student learning would likely be influenced by academic, personal, social and environmental factors. Participants shall rate their learning approach and attitude on a five-point scale, from 1 (Never) to 5 (Always).

Academic Self-Efficacy (ASE) Scale

This scale serves to measure students’ expectancy of success, effort made in the school setting and academic ability. High scores reflect high anticipation of goal achievement and outcome, whereas low scores indicate high concern about future achievement. The reliability of this scale is found to be 0.87 in this present study.

Organization and Attention to Study (OAS) scale

This measures students’ organization of tasks, time management, and goal-planning. High scores reflect effective planning whereas low scores reflect the lack of attention and avoidance of goal planning. The reliability of this scale is 0.81 in this study.

Stress and Time Press (STP) Scale

This scale measures how well students manage to face stressful situations and how this will affect their learning. High scores reflect handling stress well, whereas low scores reflect low efficacy in handling stress. The reliability of this scale is 0.77.

Involvement with College Activity (ICA) Scale

This measures the extent of a student's engagement in activities. High scores reflect active participation in activities or organizations, and low scores reflect social disconnection or being less active in participating. The reliability of this scale is 0.81.

Emotional satisfaction (ES) Scale

This measures the extent of students’ emotional response to people and environment. High scores reflect positive feeling about academic life, and low scores reflect negative feeling about, no interest in, or avoidance of academic life. The reliability of this scale is 0.72.

Class Communication (CC) Scale

This measures both verbal and nonverbal efforts to engage in class activity. High scores reflect good involvement in class activity, whereas low scores reflect reluctance in joining class activity. The reliability of this scale is 0.68.

Design and Procedure

A time series between-and-within experimental design was adopted in the current research. Students who participated in any of the three co-curricular activities were assigned to the experimental group and those who did not participate formed the control group. The relationship between involvement in co-curricular activities and student learning effectiveness, as well as between involvement in co-curricular activities and academic performance will be examined. The learning effectiveness of students was observed in three time periods under study: at the beginning (October 2009), middle (February 2010) and end (May 2010) of an academic year. The study intended to examine whether student learning effectiveness was influenced by involvement in co-curricular activities, as well as by the time factor, such as when the academic results of semester 1 were released in February. Students were asked to complete and return the questionnaire within ten minutes in class or during the activities.

Data Analysis

Within-Subject Analysis

A repeated measure was performed to test if there was any difference in the learning effectiveness of both experimental and control groups across three time periods.

Between-Group Analysis

This paper applied the analysis of covariance (ANCOVA) to test if there is any significant difference between the experimental group and the control group for the adjusted Time-3 (May 2010) means for each hypothesis. In each case, the Time-3 mean specified in each of the hypotheses was used as the dependent variable and Time-1 (October 2009) mean as the covariate.

Specifically, the ANCOVA was used to adjust the group means of the post-test on the basis of the pre-test, thus statistically equating the control and experimental groups. The significance of difference between means was tested at the 0.05 level, and the hypotheses were either retained or rejected. Effect size was measured by eta-squared. The use of covariance in this study deemed

appropriate as there were no significant correlations among the dependent measures (Stevens, 2002; Dancy & Reidy, 2004).

Results

Part I. Means and Reliabilities of the CLEI Subscales

The means of the six subscales in CLEI for all subjects participating in both the experimental and control groups are listed below in Table 1.

The reliabilities of CLEI of the present study ranged from 0.40 to 0.78 (see Table 2). This range of reliabilities was similar to that of Newton et al.'s study (2008), from 0.68 to 0.87.

Part II. Effects of the Time Factor on Student Learning Effectiveness

A repeated-measure ANCOVA was used to examine whether student learning effectiveness would be influenced by the time factor. For the control group, the estimation results indicated that there was a significant time effect on four of the CLEI subscales, except Organization and Attention to Study (OSA) and Class Communication (CC). The four subscales were FASE (2, 203) = 8.00, $p < .001$, FSTP (2, 203) = 7.23, $p < .001$, FICA (2, 203) = 2.99, $p < .05$, and FES (2, 203) = 5.46, $p < .001$ (see Table 3). However, as for the experimental group, there was a significant time effect on the Academic Self-efficacy subscale only, FASE (2, 152) = 3.49, $p < .05$ (see Table 3). Table 3 presents the means of the student learning effectiveness for both groups in the 3 respective time periods, and most of the subscale means in Time-2 appeared to be among the highest.

Part III. Effect of Participation in Co-curricular Activities on Student Learning Effectiveness

An analysis of covariance was used to examine whether the students in the experimental group outperformed those in the control group regarding the improvement in learning effectiveness. As seen in Table 5, the Time-1 subscale of Academic Self-efficacy is the significant covariate in the ANCOVA, FASE (1, 236) = 143.21, $p < .001$, $\eta^2 = 0.38$. The results for the experimental group (after participating in co-curricular activities where the Time-1 scores were taken as covariates) indicated that FASE (1, 236) = 10.36, $p < .01$, $\eta^2 = 0.04$. Importantly, participation in co-curricular activities was found to have a significant but small effect on the growth in academic self-efficacy. Table 4 presents adjusted and unadjusted

Table 1
The Means of the Six Subscales of the CLEI

The Six Subscales	Time-1 (10/2009) N = 575		Time-2 (02/2010) N = 575		Time-3 (05/2010) N = 575	
	X	SD	X	SD	X	SD
Academic Self-Efficacy (ASE)	3.43	0.41	3.52	0.45	3.47	0.45
Organization and Attention to Study (OSA)	3.06	0.37	3.13	0.38	3.09	0.39
Stress and Time Press (STP)	2.94	0.43	3.08	0.41	3.03	0.41
Involvement with College Activity (ICA)	3.16	0.52	3.17	0.47	3.23	0.50
Emotional Satisfaction (ES)	3.31	0.40	3.42	0.39	3.37	0.42
Class Communication (CC)	3.08	0.43	3.15	0.43	3.11	0.44

Note. 1 – Never 2 – Rarely 3 – Sometimes 4 – Usually 5 – Always

Table 2
Reliabilities of the Six Subscales of CLEI of the Present Study (Cronbach's alpha)

	Time-1 (10/2009) N = 575	Time-2 (02/2010) N = 514	Time-3 (05/2010) N = 359
Academic Self-Efficacy (ASE)	0.71	0.79	0.78
Organization and Attention to Study (OSA)	0.40	0.53	0.52
Stress and Time Press (STP)	0.43	0.42	0.41
Involvement with College Activity (ICA)	0.73	0.70	0.72
Emotional Satisfaction (ES)	0.45	0.53	0.53
Class Communication (CC)	0.43	0.51	0.45

effectiveness through participation in co-curricular activities.

Part IV. Impact of Participation in Co-curricular Activities on Academic Performance

A paired-sample T-test was conducted to examine whether the academic performance of students in the experimental group would be enhanced through participation in co-curricular activities. Student GPAs were collected in Time-1 and Time-3, and their means were compared to see if there was any significant difference in academic performance before and after participation in co-curricular activities. The estimation results showed that $T, \text{Time-1} - \text{Time-3} (1, 153) = 1.46, df = 153, p > .05$. Therefore, there seemed no such positive effect on student academic performance (see Table 6).

Discussion

As reported previously, the estimation results do not confirm that co-curricular activities help to enhance the learning

effectiveness of students. Contrarily rather, students who did not participate in co-curricular activities were found to achieve more improvement in learning effectiveness (in the Academic Self-Efficacy, Stress, and Time Press, Involvement with College Activities, and Emotional Satisfaction Subscales) whereas those who participated in such activities improved in the Academic Self-efficacy Subscale only. This certainly warrants further study. Among other possibilities, this could be attributed to the unique nature of the associate degree program in Hong Kong that it is basically equivalent to the first 2 years of a typical 4-year degree program, and most students aspire to continue on with their degree study, by articulating to the government-funded degree and, less preferably, other self-funded (top-up) degree programs. Either way, students are required to achieve very good academic results and resumes in order to be admitted, especially to the government-funded programs. With such clear study direction and goals in mind, together with the motivation and determination to study,

Table 3
Student Learning Effectiveness by the Time Effect

Academic Self-Efficacy (ASE)					
	<i>M</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Control Group		2	0.58	8.00	<.001
Time-1	3.34				
Time-2	3.49				
Time-3	3.50				
Experimental Group		2	0.23	3.49	<.05
Time-1	3.47				
Time-2	3.53				
Time-3	3.41				
Organization and Attention to Study (OSA)					
Control Group		2	0.04	0.57	>.05
Time-1	3.08				
Time-2	3.13				
Time-3	3.10				
Experimental Group		2	0.22	0.29	>.05
Time-1	3.07				
Time-2	3.12				
Time-3	3.09				
Stress and Time Press (STP)					
Control Group		2	0.73	7.23	<.001
Time-1	2.93				
Time-2	3.13				
Time-3	2.99				
Experimental Group		2	0.08	0.75	>.05
Time-1	2.98				
Time-2	3.02				
Time-3	2.05				
Involvement with College Activity (ICA)					
Control Group		2	0.26	2.99	<.05
Time-1	2.97				
Time-2	3.02				
Time-3	3.09				
Experimental Group		2	0.02	0.13	>.05
Time-1	3.23				
Time-2	3.27				
Time-3	3.24				
Emotional Satisfaction (ES)					
Control Group		2	0.45	5.46	<.01
Time-1	3.27				
Time-2	3.40				
Time-3	3.26				
Experimental Group		2	0.10	1.02	>.05
Time-1	3.40				
Time-2	3.44				
Time-3	3.36				
Class Communication (CC)					
Control Group		2	0.09	1.26	>.05
Time-1	3.07				
Time-2	3.12				
Time-3	3.05				
Experimental Group		2	0.04	0.37	>.05
Time-1	3.14				
Time-2	3.16				
Time-3	3.11				

Table 4
Adjusted and Unadjusted Group Means and Variability for Enhancing Student Learning Effectiveness through Participation in Co-Curricular Activities Using the Scores of Time-1 as a Covariate

	Academic Self-Efficacy (ASE)				
	<i>N</i>	Unadjusted		Adjusted	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Experimental Group	154	3.42	0.40	3.34	0.31
Control Group	205	3.49	0.47	3.02	0.28

Table 5
Analysis of Covariance for Enhancing Student Learning Effectiveness through Participation in Co-curricular Activities Using the Scores of Time-1 as a Covariate

Academic Self-Efficacy (ASE)					
Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P</i>	<i>eta</i> ²
Time-1	1	17.33	143.21	<.001	0.38
Groups	1	1.25	10.36	<.01	0.04
Error	357	0.12			

Table 6
Paired-Sample t-test Comparing Students' Time 1 and Time 3 Academic Performance

Academic Performance (Time 1 – 3)				
Source	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Time 1	2.81	0.62	1.46	> 0.05
Time 3	2.76	0.65		

work hard to boost their learning effectiveness and academic results. This helps explain their improvement in learning effectiveness, which was likely driven by a clear direction and goal for the advancement of study, rather than by participation in co-curricular activities.

It is worth noting the rather high attrition rate (39.61%) of the co-curricular project too. Among the 255 students who participated in the project in Time-1 (October 2009), only 154 of them continued on in Time-3 (May 2010). This high attrition might also reflect the clear study direction and goals of the associate degree students. After the examination results were released in Time-2 (February 2010), some of them might have thought that participation in co-curricular activities would not help improve their grades or educational expectations as much as they expected. They then decided to withdraw from the project (Hunt, 2005).

As many undergraduate programs in Hong Kong are aimed for well-rounded or whole-person education, expectedly co-curricular and experiential learning will continue to form an integral part of the teaching and learning strategy as well as the overall degree program. As for further development, co-curricular projects should be designed and structured in such a way as to integrate with the core curriculum. The objectives and intended learning outcomes, together with other related

activity and assessment details, shall be well spelled out and communicated with students too.

In addition, the academic staff of community colleges might need further training on the design and implementation of co-curricular activities. Undoubtedly, academic staff members at the tertiary level are well equipped with their own subject expertise, professional knowledge, and industrial exposures, and they might also have experiences on organizing co-curricular activities, though, many of them do not attain any formal teacher training, especially for higher education. Therefore, further training or professional development on the design and implementation of structured and learning-oriented co-curricular activities, (e.g., in-service training for teachers in such areas like pedagogy and curriculum design, should help enhance the overall effectiveness and success of co-curricular projects).

In addition to boosting the learning effectiveness of students, co-curricular and experiential learning activities are widely thought to enrich students' practical exposures, hands-on experiences, and other soft skills like problem-solving, presentation and interpersonal communication, and self-discipline and management skills, etc. Concerted efforts (that will also involve the student affairs unit of the college) should be made to develop such co-curricular projects into an

integral part of the undergraduate curriculum. Student affairs professionals are well equipped with the expertise and experiences in organizing various student activities including personal growth, study skills, and career and other extra-curricular development. This synergy between academic and student affairs staff should be able to bring about more comprehensive experiential learning experiences for the students. Consideration should also be given to making it a college-wide initiative, for instance, by setting up a kind of teaching and learning unit to facilitate teachers' professional development. It can among other things provide various talks, seminars, workshops, or even research opportunities related to co-curricular and experiential learning and how they could be integrated with the learning outcomes and missions of the degree programs as a whole.

As discussed previously, the 2-year associate degree program might not be desirable, especially for the offer of comprehensive co-curricular learning programs. Students are too pre-occupied by the single most important target to achieve outstanding academic results, perhaps at the expense of the chance to participate in co-curricular activities. Right now, on average only about 10% of the associate degree graduates could be admitted to the government-funded degree places. Situations should improve if more articulation opportunities are made available for associate degree students. In this regard, the government has increased steps to promote the growth of private universities that will provide 4-year degree programs. Besides, given the self-funded nature of community colleges and private universities, the majority of resources will be allocated to classroom teaching and other necessities like teaching/learning facilities and other campus needs. The government should continue to provide extra funding, on a competitive basis perhaps, to support such teaching and learning quality enhancement projects.

Conclusion and Suggestions for Further Research

The two purposes of this study were to use the time series between/within experimental design to examine whether participation in co-curricular activities could (1) enhance student learning effectiveness, and (2) have positive effects on the academic performance of self-funded sub-degree students in Hong Kong. It was found that participation in co-curricular activities could not enhance student learning effectiveness. Associate degree students were too preoccupied by the need to attain good academic results in the first 2-3 terms of study. The high attrition rate also suggests that many students did not think participation in co-curricular activities could improve their grades, especially when they received the results of semester-1, and they then

chose to drop out. Besides, there was no positive effect of participation in co-curricular activities on student academic performance either. Rather, this study suggests that student learning effectiveness is affected by the time factor. High learning effectiveness was observed in the middle of the academic year but relatively low learning effectiveness at the end of the year.

The present study represents at most an early attempt to look into the learning effectiveness of self-funded sub-degree students in Hong Kong, and shall not be generalized to draw conclusions on the overall self-funded tertiary sector. However, it managed to produce some indicative results, which could be further explored to study the development of community colleges in Hong Kong. Apart from the sampling and research approaches, further study could explore the potential of co-curricular activities and other experiential learning opportunities in promoting student learning effectiveness.

Importantly, although much research on classroom learning has already been carried out, the evidence from this research strongly supports the enhancement of academic self-efficacy as a critical element in the learning effectiveness of sub-degree students. Further research could also be conducted to explore the specific strategies of co-curricular activities to promote the students' academic self-efficacy.

Methodologically speaking, the quantitative results provide some contextual foreground for the future qualitative studies in similar topics. Therefore, triangulation, such as focus group interview, archival study, case study, and so forth, is advised to investigate the potential of co-curricular activities in promoting student learning effectiveness in depth in order to enhance the confidence in the ensuing findings, and to draw convergent findings.

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A Desire for the Personal: Student Perceptions of Electronic Feedback

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An earlier study conducted into tertiary student perceptions of feedback on their work revealed a mixed response to the idea of electronic feedback. This result was surprising considering the attention given to Generation Y and the preference for digital technology in their lives. This paper reports on the results of a follow-up study exploring a 2010 cohort of Australian tertiary students and their perceptions of electronic formats for providing feedback on their work. Student preferences, experiences, feedback clarity, teacher feedback and feedback from others were all investigated within the overarching context of *electronic feedback* on students' work. A survey was used to collect data about this topic via a combination of qualitative open-ended and closed questions. The findings continue to generate surprise as young, tech-savvy students revealed a preference for the personal via face-to-face and hand written feedback, while seeming to just tolerate electronic formats as a back-up form of feedback. In considering these findings, this paper argues that we cannot make assumptions about how students want to use technology in all aspects of their lives, including the learning environments in which they are engaged. In this hyper-technology aware period, there is a human aspect to feedback that is conveyed through non-electronic forms that students value very highly.

Introduction

"There's only so much you can convey in the electronic form." "Electronic feedback is very distant. It seems like there is less opportunity for clarification." (students' comments from the Students' Perceptions of Electronic Feedback survey, 2010)

Constructive, timely feedback is central to student learning (Hattie & Timperley, 2007). In particular, formative feedback is important because it presents opportunities for students to address aspects of their learning and to develop an understanding of their progress. Formative feedback gives students opportunities to apply specific feedback to their work and learn as they do so. Yorke (2003) contends that formative assessment, whether informal or formal, is critical to success in higher education but should not solely focus on correction. Formative assessment may also involve a number of participants including students' peers. According to Yorke (2003), summative assessment, although not often recognized for such, can also act in a formative capacity in developing students' overall learning. Furthermore, he highlights research that identifies the significant value students place on organized formative feedback sessions (see for example, Carroll, 1995, Rolfe & McPherson, 1995).

While there is recognition of the significant role and value that feedback plays in student learning, very little is understood about how students perceive the feedback they receive on their work (Rowe & Wood, 2008). In an earlier study, a cohort of Australian tertiary students of mixed-year levels surveyed in 2009 revealed that students hold very strong opinions about the quality, quantity, frequency, and timing of feedback they receive on their work (Budge & Gopal, 2009).

Furthermore, the findings of that study showed that students value feedback highly and perceive it as an indicator of teaching staff caring about their work, as a "justification of their grade," and as an indicator of "what they need to do to improve their performance" (Budge & Gopal, 2009, p. 76).

In their study on feedback, Rowe, and Wood (2008) state that while constituting a central aspect of learning, education research to date has largely neglected the feedback issue particularly from the student's point of view. This research gap, also identified by Weaver (2006), is an important one to explore because feedback is understood to be a critical part of student learning (Black & William, 1998; Hattie & Timperley, 2007; Sadler, 1989) and the most powerful influencer of student achievement (Hattie, 1987).

The lack of research about student perceptions of feedback was the original motivator for the 2009 study (Budge & Gopal, 2009). An extra driver to developing the study was low levels of student satisfaction with feedback. The study used an adaptation of Rowe and Wood's 2008 survey instrument and aimed to explore students' perceptions of feedback. Students from one discipline were surveyed, and both quantitative and qualitative data was collated and analyzed to identify patterns and relationships of interest. By contextualizing the study for a specific discipline, the researchers developed a detailed understanding regarding the provision of feedback from the student perspective. Contrary to popular opinion that suggests students do not value or use feedback to improve their work, the authors found that 95% of respondents indicated they use feedback to improve their results in future assignments and projects.

The results of that earlier 2009 study shed some valuable light on student views, thoughts, values, and beliefs about the feedback they receive. In particular, the study revealed that students value detailed, timely feedback with a focus on quality information about the weaknesses and strengths of their work, that they are open to peer and self-assessment as forms of feedback, and that they value feedback as a means to improving their learning.

One finding of the 2009 study was particularly surprising. In relation to perceptions of electronic feedback on their work, students revealed a mixed response to the idea and use of it. This result was especially surprising given all the discussion about Generation Y students and the preference for digital technology in their lives (Gardner & Eng, 2005; Martin, 2005). To date there has been little research on how students perceive electronic feedback. After sharing the findings of the 2009 study at a conference and hearing from other participants that they were beginning to discover similar information, the author became intrigued by this topic. In an endeavor to know more, a follow-up study was conducted in 2010 with the same tertiary student cohort to investigate this topic in more detail. The aim of the study was to tease out the topic further and investigate student preferences, experiences, issues about feedback clarity, students' views on teacher feedback and feedback from others, all within the overarching context of "electronic feedback." The overall aim was to gain a deeper understanding of what students think about the use of electronic feedback as a mechanism for communicating information about their work.

Methodology

The participant cohort was the same as that in the 2009 study: students from a school within a large urban Australian university, delivering both higher education (with a focus on academic skills and knowledge) and vocational education and training programs - VET (with a focus on applied skills and knowledge). Most programs are delivered in a face-to-face mode, with a small number also offering a blended mode (a combination of face-to-face and online learning). This distinction in terms of mode is important to acknowledge because to a large extent the class mode will determine how feedback is given to students on their work. For example, if all classes were taught online, it would be expected that most, if not in fact all feedback would mirror this mode and be provided via electronic formats. Given the number of programs in the School offering a blended mode is currently still very small, it can be reasonably assumed that participants were from programs offering face-to-face classes. Students participating were not asked to

identify the program in which they were enrolled. An additional contextual element is that the School teaches a creative discipline: fashion and textiles.

The study involved 69 ($n = 69$) participants in total via an electronic survey. When total enrollments for the School were taken into account, the response rate represented 5%. The response rate in the 2009 study was a little higher (7%); however, as the authors pointed out in the findings of that study, a lower response rate appears to be an issue in relation to electronic surveys. However, the sample represented the two sectors in the School in line with their wider proportion; higher education students comprised almost 30% of participants, and just over 70% were from VET programs.

Participants were asked a series of questions via an electronic survey titled *Students' Perceptions of Electronic Feedback*. The survey was developed by the author and aimed to elicit students' views of receiving feedback on their work via electronic formats. Three of the seven questions were closed questions, while the remaining four were open-ended and of a qualitative nature. The survey was conducted during the first semester of 2010, and students were given a one month period to respond. It was explained to participants that the aim of the study was to better understand student views on the topic of electronic feedback on their work.

Analysis of the qualitative data was undertaken by studying yes/no responses to questions and then thematically coding the data collected via the four open-ended survey questions to identify patterns and relationships of interest. Closed questions were analyzed descriptively by looking at percentage responses.

The definition of "electronic feedback" used in this study and for the purpose of this paper includes feedback given to students about their work via email, feedback given in the form of electronic notes on essays/projects/folios or other, via blogs and/or wikis, via the Learning Management System Discussion Board (in Blackboard), and via online games/activities. Students were also able to indicate whether there were other ways they received electronic feedback on their work in addition to these categories. Interestingly, they did not offer any extra categories to those provided by the survey.

The term "teachers/lecturers/tutors" was used in the context of the survey questions as a variety of these terms are used and heard in a university offering both higher education and vocational education and training programs. However, for simplicity, the term "teacher" will be used in this paper.

As the researcher in this study, the author was also the learning and teaching advisor for the academic school that forms the center of this study. In this role, the author's contact is mostly with staff rather than

students. University ethics approval was gained to carry out the study, and all participation was on a voluntary, anonymous basis.

Findings

Feedback Preferences

The first two questions of the survey asked students to indicate their preferences and experience of feedback more generally. Response data is provided for these in Tables 1-2. For both questions students could choose one category only to respond to from the seven prescribed areas.

In response to question one, it is immediately clear that students prefer feedback from their teachers to be given verbally in a private, face-to-face format, with just over 55% indicating this preference. There was also a strong preference for private, hand written feedback (27.5%). Strong responses in these two areas suggest that students have a preference for private feedback from their teachers.

In response to question two, once again, students indicated a strong preference for privately given face-to-face verbal and hand written feedback from other students and/or work experience supervisors (see Table 2). This response is consistent with their preference for how feedback is given by their teachers. Interestingly, the response rate for “electronic feedback” is consistent (13%) for both questions one and two, suggesting this format is not affected by whether teachers, students, or others are giving the feedback. However, there was less of a preference for publicly given face-to-face feedback from teachers compared with other students and work experience supervisors, which suggests a degree of sensitivity surrounding this.

Electronic Feedback

In answering question three, students were able to check as many areas as was appropriate to match their feedback experience. The results indicate that students participating in this study were most familiar with receiving electronic feedback via email. There was some experience in having received feedback via “electronic notes on essay/project/folio, etc.” and Discussion Board in the university Learning Management System (Blackboard), but there was almost no experience via blogs, wikis and online games/activities (see Table 3). Interestingly, five out of the twelve students who checked “other” in response to question three indicated that they had experienced none of the six forms of electronic feedback suggested in the answer fields. Therefore, 12 % of the sample (as only 42 of the 69 completed this question) indicated that they had not experienced

electronic forms of feedback on their work. The remaining seven “other” responses described non-electronic forms of feedback they had experienced (e.g., face-to-face, and so were deemed not relevant in terms of answering this particular question).

The last four survey questions were of an open-ended nature and elicited a considerable amount of qualitative data from students. In relation to electronic feedback, questions were focused on issues of communication clarity, issues regarding whether teachers, students, or others should use it, and the electronic submission of work and accompanying feedback. The four questions were as follows:

4. When you receive feedback in an electronic form do you feel that the communication is clearer than when other forms are used (e.g., verbal, hand written feedback? If yes, why? If no, why not?).
5. Do you believe teachers should use electronic feedback for your work? Why or why not? If yes, how often and for what purposes?
6. Do you believe others (e.g., students, work experience supervisors, should use electronic feedback for your work? Why or why not? If yes, how often and for what purposes?).
7. If you submit work electronically, are you happy to receive electronic feedback or would you prefer another method (e.g., verbal or hand written? Why?).

Question four focused students’ attention on feedback clarity, and a significant 43% of all qualitative responses where an emphatic “no” in relation to the question about communication being clearer via electronic feedback. In addition, 26% believed it was clearer in communicating information, while 17% said they did not know, 10% indicated both electronic and other forms were good for communication clarity, and 3% responded in a way that did not answer the question. The reasons expressed for “yes” and “no” responses are outlined in Table 4.

Survey questions five and six were focused on exploring students’ beliefs about teachers and students or others using electronic feedback on their work. Students were more supportive of teachers using electronic feedback on their work (59% “yes”; 31% “no”) than they were for students or others (such as work experience supervisors) doing so (43% “yes”; 43% “no”). Of the students who agreed with the idea of teachers using electronic feedback, 22% had firm conditions attached to their agreement. Examples of how students expressed these conditions included the following responses:

Table 1
Student Preferences for How Feedback is Given on Work by Teaching Staff

Question 1. How do you prefer to receive feedback on your work from teachers/lecturers/tutors?		
	Response percent	Response count
Face-to-face verbal feedback [private]	55.1%	38
Face-to-face verbal feedback [public]	4.3%	3
Hand written feedback [private]	27.5%	19
Hand written feedback [public]	0.0%	0
Electronic feedback (e.g., by email, blogs, wikis, typed comments on your work) [private]	13.0%	9
Electronic feedback [public]	0.0%	0
Other (please specify)		5

Table 2
Student Preferences for How Feedback is Given on Work by Other Students and/or Work Experience Supervisors

Question 2. How do you prefer to receive feedback on your work from other students and/or work experience supervisors?		
	Response percent	Response count
Face-to-face verbal feedback [private]	53.6%	37
Face-to-face verbal feedback [public]	10.1%	7
Hand written feedback [private]	23.2%	16
Hand written group feedback [public]	0.0%	0
Electronic feedback (e.g., by email, blogs, wikis, typed comments on your work) [private]	13.0%	9
Electronic feedback [public]	0.0%	0
Other (please specify)		2

Note. The two “other” responses added no new information to the fields already listed in the question.

- “Depending on the subject, if it is general work it’s fine with electronic feedback, but if it’s creative work then it needs to be face to face!”
- “They should, however, not for big assignment feedback, only on small due dates and small hand ins.”
- “I think it is ok for maybe exam work, but any design or new subject areas should have results delivered in person.”
- “Yes, if it is not an important assessment it would be quicker for teachers and students if feedback was given electronically but not for important assessments.”

The reasons given with the higher proportion of “no” responses to question six about electronic feedback from students and others indicate that students want more of a dialogue about their work in these situations and that electronic feedback doesn’t provide enough of an opportunity for that. A small number of the negative comments given also related to students

feeling that feedback should not come from other students, but rather from the teacher only.

The final survey question asked students about their opinions of receiving electronic feedback on work also submitted electronically. Compared to previous questions asked about electronic feedback, students were more supportive of this as an option (71% “yes”; 28% “no”). However, of the group who agreed with this option, 35% had strong conditions attached to this such as: the feedback is detailed; depends on the weighting of the assignment; acceptable unless there is a need for further discussion on the work; the opportunity of verbal feedback is still an option; that it is genuine and constructive; and that the feedback is well written.

Discussion

When all the data gathered during this study is considered and students’ perceptions of feedback as a whole are explored, interesting information surfaces offering valuable insights for those teaching in contemporary tertiary education environments. In

Table 3
Student Experience of How Electronic Feedback has been Given on Work

Question 3. Have you had experience in receiving feedback on your work from:		
	Response Percent	Response Count
Email	92.9%	39
Electronic notes on essay/project/folio etc.	33.3%	14
Blogs	2.4%	1
Wikis	2.4%	1
Discussion Board (in Blackboard)	19.0%	8
Online games/activities	2.4%	1
Other (please specify)		12

Table 4
Reasons For and Against Electronic Feedback in Relation to Clarity of Communication

Reasons For	Reasons Against
<ul style="list-style-type: none"> • Can refer to it later • Concise and direct • Clearly thought out before given • Teacher tends to elaborate more • Convenience, efficiency • Easier to read than handwriting • Explanation is better • Is a record • Time to read, absorb and refer back 	<ul style="list-style-type: none"> • Teachers do not answer questions in emails • Not personal enough, too distant • Too short, not enough detail • Does not feel official enough • Teachers do not get results back promptly • Verbal is more detailed, easier to clarify points • Hand written is more direct • Verbal is more direct • You can misinterpret electronic feedback • Less informative • Face-to-face is better as you have the work there in front of you • No chance of discussion, cannot ask questions on the spot • Sometimes it is just graded so not enough information is communicated • It is difficult for the teacher to write everything they need to say

relation to electronic feedback on their work (or indeed feedback generally), what is clear from the findings of this study is that students value opportunities for a personal connection with their teacher as well as others. They have a strong desire for detailed feedback and a preference for feedback to be provided in a private forum. In addition, due to the nature of the work being submitted in creative disciplines, electronic feedback may be limited in its ability to provide the feedback required for learning. A well-rounded feedback package which provides information to students about their progress in a variety of forms and which does not make assumptions about students' views and preferences is suggested as a strategy to assist student learning.

The Personal Connection

An overwhelming theme that came through the qualitative data collected is that students value the personal experience and connection when feedback is given verbally, face-to-face, regardless of who it is from. In responding to the question about whether feedback should be given electronically, one student stated the following: "No – that separates the procedure. The teacher and student need to communicate with each other. The student and the teacher learn from all of these interactions." Students like this one perceive feedback as a two-way communication with both parties actively involved and learning. To these students, electronic feedback is

viewed as static, one way, and not alive. Electronic feedback is viewed as “not human enough,” as another student described it. This concurs with Wood’s (1987, as cited in Yorke, 2003) view that feedback is a form of collaborative activity between the participants (e.g., the student and the teacher). Even when they can see the value and convenience in receiving electronic feedback, students frequently responded by saying that their first preference was still for personal, verbal face-to-face feedback. Many agreed that both options, when used as a package, were acceptable. However, very few students expressed comments suggesting that they would be happy to receive electronic feedback alone.

The importance of the personal connection was also evident in the earlier study which found that students perceive feedback as an indicator that teachers care about their work (Budge & Gopal, 2009). In their study on feedback, Price and Donovan (2007) also support the need for a more personal approach and for feedback to be considered in the broader context of student learning rather than just in relation to a single piece of assessment.

Craving the Detail

Students also value the detail in feedback on their work, regardless of the form in which it is given. One student noted the following: “Again, not really fussed . . . I have found so far that feedback is inadequate and incomplete and I believe that is more important than the method of delivery.” This finding is also consistent with those of the earlier study in which students referred to the need for a greater amount of higher quality feedback more frequently (Budge & Gopal, 2009). Other studies have also confirmed students’ desire for detailed feedback (Higgins, Hartley & Skelton, 2002; Rowe & Wood, 2008; Rowe, Wood & Petocz, 2008; Weaver, 2006).

Creative Disciplines and the Nature of Feedback

In relation to the creative nature of the discipline in which this study was conducted, some interesting insights were gained about the kind of feedback that students perceive as valuable. Comments throughout the responses referred to the physical nature of the work being submitted and the need to discuss it and look at it when receiving feedback. A connection with their learning was implied in these comments. In this respect, students viewed electronic feedback as limited in providing the kind of feedback for their learning that they need in a creative discipline. “With such visual based submissions it’s good to discuss the work I show,” one student explained. This perspective about the kind of feedback on creative work that is valued by students is an issue that those teaching in

creative disciplines need to be mindful of, and it is an issue that also surfaced during the earlier study conducted with the same student cohort (Budge & Gopal, 2009). Differences in assessment and feedback traditions between creative and other disciplines are also commented on in the findings of Weaver’s (2006) study about student perceptions of feedback. Weaver’s findings highlight the strong oral tradition of feedback through tutorials in art and design programs. Where possible, teachers may need to use oral forms of feedback more often in creative disciplines as a means of communicating both the explicit and tacit knowledge associated with complex, creative work.

Private Versus Public

Questions one and two in particular revealed a tension between students’ perceptions of publicly and privately given feedback. Data collected from these two questions indicates that students have a preference for privately given feedback regardless of who the feedback provider is. This suggests an issue of sensitivity for students in receiving feedback, as well as the need for privacy to allow for this. The 2009 study revealed that students attach a great deal of the personal to their work (Budge & Gopal, 2009). Teachers can address this issue by ensuring that when they need to give feedback publicly to the whole class or group that it is based on group work rather than that of an individual.

A Well-rounded Feedback Package

What is clear through the research conducted with this cohort in both the earlier and current study (2009 and 2010) is that students’ value feedback when it is provided through a variety of forms. While they do value privately given, face-to-face, verbal feedback from their teachers over other feedback forms, these two studies show that students are also open to other forms of feedback (e.g., peer feedback, group-to-group feedback, electronic feedback [from teachers, peers and others], verbal feedback, and written feedback). What they do not value is the idea that one of these other strategies, such as electronic feedback, might be the *only* way feedback is given. Viewed as a package, feedback on their work that is varied by form and provider, that is timely, and that provides enough detail for learning is of value to students and can deliver useful information for deep learning (Biggs, 1999). This idea is also supported in the feedback literature (see for example Boud, Cohen, and Sampson, 1999; McCallum, Bondy & Jollands, 2008; Potter & Lynch, 2008; Price & O’Donovan, 2007; and Rowe, Wood, & Petocz, 2008.)

Electronic Feedback, the Digital Age, and Assumptions

What is also of interest from the findings of this study is the ambivalence students expressed toward electronic forms for providing feedback. Students have very mixed views about the role and value of feedback in electronic forms. This emerged in both the 2009 and 2010 studies. This finding continues to generate surprise for the author, other academic developers and teachers as young, tech-savvy students reveal a preference for the personal experience via face-to-face and hand-written feedback while they seem to barely tolerate online formats as a back-up form of feedback.

In considering these issues the limitations of the study need to be acknowledged, particularly in relation to class mode. That is, this study was conducted with a cohort of students primarily experiencing face-to-face classes. If the same study had been conducted with a cohort enrolled in online programs (which is the case for many distance education programs), it could have conceivably produced quite different results. The students' experience in an online program context could mean that they are more open to electronic feedback; however, further studies in this area would be needed to evidence this.

Conclusion

While conducted in a particular tertiary environment with a small sample, the insights from this study into students' perceptions of electronic feedback could well be applicable across other teaching contexts. The message here is that we cannot make assumptions about how students want to use technology in all aspects of their lives, including the learning environments in which they are engaged. Significantly, in this period of history where technology plays a central role in peoples' lives, there is a human aspect to feedback that is conveyed through non-electronic forms that students value very highly. As educators we must acknowledge this preference for the human and also respect it, and we must find ways in which to work with it while also acknowledging the tensions this contributes since the workloads of those teaching in tertiary environments continues to increase (Blackmore, 2005). Moreover, students are telling us that they require detailed feedback for learning. Due to the nature of the work being submitted for evaluation in creative disciplines, there may be a need for more face-to-face oral feedback than in other disciplines. Students are also sensitive to the feedback they receive and have a preference for feedback to be given privately. This needs to be considered and a reasonable balance obtained. Indeed, all of these issues need to be acknowledged and contemplated within the broader

framework of a multi-faceted feedback package which varies both in form and provider. When these issues are considered and a good balance of constructive and timely feedback is provided, students can more readily absorb and apply its meaning in relation to their learning.

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Modern Measurement Information Graphics for Understanding Student Performance Differences

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We present an example analysis and corresponding information graphics of data from a cognitive ability assessment as a means to illustrate the use of a Rasch measurement approach and advantages inherent in such an approach for a wide variety of teaching and learning investigations. The importance of placing measurements of student performances and measurements of assessment item difficulties on the same scale is demonstrated through the use of the information graphics. The possibilities for teacher-scholars to begin including basic Rasch analysis and graphics within studies of students are highlighted. Improved understanding of the relationships between student performances and the validity of instruments used to assess those performances is emphasized. The importance of key measurement principles, as illustrated with an ability assessment, is discussed in relation to potential application with classroom assessment of learning and survey assessment.

Introduction

Studies of teaching and learning in higher education or professional settings frequently make use of assessments that quantify learners' knowledge levels, abilities, motivations, and perspectives. The conclusions regarding students that teacher-scholars draw from such studies are often affected by the diversity among participants examined. Conclusions can also be affected by the validity of the instruments used to collect data and the analytic approach used to determine measures that allow meaning to be drawn from data. With these fundamental influences in mind we present an example study of college student abilities that illustrates the use of a modern measurement approach known as the Rasch model (Rasch, 1980), as well as the benefits inherent in such an approach for visualizing data across a wide variety of teaching and learning studies. Through this example we emphasize the need to scrutinize the functioning of the instruments as a means to improved understanding of the implications from investigations. Furthermore, we hope to encourage teacher-scholars who are unfamiliar with the procedures described here by suggesting appropriate software tools and resources.

An Example Study of Student Differences

The context of the illustrative investigation will be briefly characterized here to clarify purpose and help stimulate thinking about relevance to instructional and learning studies generally. First, some of the theoretical issues that interested us centered on how students' differences in visuospatial ability were distributed for a particular group of our students. We also wanted to determine whether our selected instrument was an appropriate tool for our population of students. That is, we first asked whether our cohort of students was primarily similar to one another or primarily different

from one another in visuospatial ability, and second, whether the quality and difficulty level of the assessment was a good match for most of our students in this program. This study was considered part of an analysis of student characteristics to inform instructional and curriculum design for this type of student cohort.

To address these issues we selected a widely used instrument to assess cognitive visuospatial ability. Although many assessment instruments could be used we selected a particular instrument for its appropriateness in illustrating key fundamental issues and for its long history of use in research within higher education and other settings (Rittschof, 2010; Witkin, Oltman, Raskin, & Karp, 1971). Although we focused on an ability instrument, many of the general principles described are relevant to classroom assessment of learning and survey assessment. For example, by using this instrument we can focus on (a) the issues of item difficulty, which are relevant to classroom assessments of specific content areas; and (b) the issues of student differences, which are relevant to deeper understanding of students as learners.

The purpose of using a Rasch model approach as part of the data analysis was to consider the findings relative to individual students, the sample of students, the instrument's individual items, and the instrument as a whole. Further explanation of this rationale for using a Rasch approach will follow.

Visuospatial Ability

Current psychological research on the architecture of the human mind often involves the components of working memory such as those dealing with the visuospatial processes (Baddeley, 1999). Investigations into the working memory's visuospatial processes are important for improved understanding of human perception and learning, as imagery-based information

is used increasingly within contemporary instructional contexts. One approach to examining visuospatial processes involves the administration of tests that require perceptual disembedding (i.e., visual locating) of simple shapes from within more complex shapes (Miyake, Witzki, & Emerson, 2001). A frequently used test of perceptual disembedding, commonly referred to as field dependence-independence (FDI), is the Group Embedded Figures Test (GEFT; Witkin, Oltman, Raskin, & Karp, 1971). The use of tests such as GEFT in psychological and instructional studies has been common since the 1960's and has continued to the present (Zhang, 2004).

Examples of recent applied studies dealing with learning, training, and visuospatial ability include those that have focused on problem solving with text and visual instruction (Angeli, & Valanides, 2004), web-based learning (Chen, & Macredie, 2004), and training needs among astronauts for improvement of 3-dimensional spatial orientation skills (Richards, Oman, Shebilske, Beall, Liu, & Natapoff, 2002). Over several decades of studies assessing students with the GEFT instrument, higher GEFT performance has repeatedly been associated with cognitive and learning advantages in a variety of content domains and instructional settings (Rittschof, 2010). Furthermore the GEFT was shown to have a reliability of $r = 0.89$ over 3 years for males and females (Witkin et al., 1971). It is worth noting that while numerous studies over the years have mislabeled the GEFT instrument as a test of cognitive style, here we build upon empirical investigations (e.g., MacLeod, Jackson, & Palmer, 1986; Miyake, Witzki, & Emerson, 2001; Zhang, 2004) that have confirmed GEFT to be more accurately classified as a test of cognitive ability and not a test of style.

Modern Measurement

The Rasch model is actually a collection, or family, of contemporary measurement models (Wright & Mok, 2004) for determining properties of instruments and data in human research. Appropriate use of Rasch measures and diagnostic tools represents application of a modern paradigm and can lead to substantive differences in the interpretations of investigation outcomes when compared with classical test theory methods (Andrich, 2004). For example, when only raw scores and corresponding percentages are used, scores do not reflect the differences in difficulty among test items. Use of raw scores rather than constructed measures can lead to the inaccurate assumption that point or percent differences among students are of the same magnitude at the low end or mid range of performances as they are at the high end of performances, for instance. In contrast, scaled measures provide advantages for comparing scores of people and

assessment items because the student performance measurement values and the item difficulty measurement values are placed on a common scale. Two commonly used example members of this family of Rasch models are referred to as the dichotomous model and the rating scale model. These models allow measurement scaling of student differences by using raw ordinal scores from assessments to construct the scaled scores as interval level measures.

When assessing student abilities, the Rasch model allows student ability and an assessment item difficulty parameter to exist on the same measurement scale, thus allowing them to be directly comparable. Using the Rasch model the probability of a correct response can be determined as a function of the difference between the measured ability of the student and a difficulty parameter of the item in question. For instance, when an item and an examinee both have the same Rasch measure, this will mean that the person has a 50% probability of scoring correctly on that item.

The Rasch model can be used with the relatively modest participant sample sizes (e.g., 50 to 200 students) that are of interest in many studies of teaching and learning where measurement of individual student performances and item characteristics is desired. In addition, the Rasch approach can allow examination of validity for both student groups and individual students, even when some data are missing. For mathematical descriptions of Rasch analyses and comparisons to different analytic models, Smith and Smith (2004) provide a comprehensive and readable resource.

Method

Participants

University students ($N = 114$) at the sophomore level attending a medium-size university in the Southeastern United States volunteered as an optional activity within a teacher education prerequisite course. Participants were primarily female (approximately 85%) between the approximate ages of 19 to 22 years.

Instruments

The Group Embedded Figures Test (GEFT; Witkin et al., 1971) assesses visuospatial ability using 18 items that each require visually locating, or disembedding, specific simple shapes from within larger complex shapes, then correctly tracing the outline of the embedded simple shapes. Simple shapes include the outlines of a hexagon, a rectangular prism, and a cross, as well as the outlines of shapes resembling a simple house, a necktie, a letter *t*, and the lower right half of a picture frame.

Procedure

Experimenters administered the GEFT in classroom settings. The procedure included approximately 5 minutes for the instruction and practice section, then 10 additional minutes for completion of the two sections of the test.

Analyses

Rasch dichotomous model procedures were used on examinee scores in order to determine measurement properties of the GEFT instrument and of the student performances. The dichotomous model is appropriate for assessments such as GEFT in which items are scored as correct or incorrect. Measurement properties of interest that are addressed by the Rasch procedures include *additivity*, *unidimensionality*, and *invariance*. Additivity refers to a measure that approximates an interval scale so values can be added meaningfully, for instance. Unidimensionality refers to the single construct the instrument is measuring. The construct should closely approximate a single identifiable dimension or domain rather than many dimensions or domains. This construct dimension is often referred to as a *latent trait* whereby this trait directly influences examinee responses to the items designed to measure that trait (Reise, Ainsworth, & Haviland, 2005). Invariance refers to the need for measurement scales to not differ excessively on the construct with different situations or groups. That is, the scale should be a reliable metric for various categories of people on the construct of interest.

The Winsteps computer program (Linacre, 2006b) was used for the Rasch dichotomous model analysis. Winsteps was selected for its functionality, its compatibility with other data formats, its comparative low cost, and its worldwide availability. Microsoft Excel was used in conjunction with Winsteps to generate some of the graphics.

Student results were reported on the following measures: scaled ability measures, standard errors, and a measure that indicates how well each student fits with overall expected responding when compared the other students. Assessment instrument item outcomes were also indicated by scaled difficulty measures, standard error, and fit with the other items. By placing both student outcomes and item outcomes on an identical scale, students and items were directly and meaningfully compared for greater understanding of group, student, instrument, and item performance. Graphic illustrations will be used to support connections between students and items.

Results

A Scale of Performance: Person Ability Measures

The range and distribution characteristics of scores were of interest as we began to understand how

individuals performed. The measurement scaling of those raw scores allowed for the examination of interval measures, as opposed to ordered quantities that are frequently used in traditional test score analyses. For example, comparisons among individuals can account for the fact that a one point raw score difference among high scorers can mean a larger measured difference than a 1 point raw score difference among average scorers due to typical variations in item difficulties. Thus, after constructing measures, differences among groupings of scores along the distribution were more meaningfully compared than were differences from raw scores or corresponding percentages.

Four participants had extreme scores, suggesting they were not a suitable match with the test. Of these, three scored the maximum of 18 correct. Thus, abilities of the three high scorers could not be estimated specifically because the test was too easy for them, not unlike many testing situations. This finding has implications for possible revision of the test. At the other extreme one student scored the minimum of 0 correct on the GEFT. It should be noted that manual scoring of each participant's test revealed that low scores were not simply due to participants leaving all or most items blank. That is, all participants attempted items throughout the test.

Although eliminating such outliers from further analysis is often appropriate depending upon one's purpose, we retained these outliers for our primary analysis as the responses appeared valid and useful for this illustration. Table 1 shows selected examples of person statistics ranging from the highest scorers to the lowest. The mean raw score was 10.5 out of 18. These raw scores were scaled using a Rasch procedure that yields log odds units known as logits. Scaled ability measures varied from -4.66 to 4.74 logits with the mean score set at zero. By comparison, removing the four outliers led to a range of measures from -3.36 to 3.42 logits. The fourth column of Table 1 shows examples of the student measures. Examinees who scored 9 out of 18, which is near the midpoint, were 0.29 logits lower on the scale than those who scored 10 out of 18. On the other hand, those who scored 17 out of 18 were 1.32 logits lower on the scale than those who scored 18 out of 18. These logit differences illustrate the distinction between raw scores versus constructed measures discussed previously.

A reliability estimate of 0.85 was also calculated using Cronbach's alpha procedure with the students' scores. This reliability level supported the favorable internal consistency of the assessment with this sample of students.

Patterns of Expected Performance: Person Pathway Plots

One important reason for placing student scores and items on the same scale is to examine the relationship

Table 1
GEFT Instrument Rasch Person Statistics in Descending Measure Order

Entry Number	Total Score	Count	Measure	Model S.E.	Infit ZSTD
18	18.0	18	4.74	1.86	Maximum Estimated Measure
67	18.0	18	4.74	1.86	Maximum Estimated Measure
77	18.0	18	4.74	1.86	Maximum Estimated Measure
13	17.0	18	3.42	1.08	0.2
31	17.0	18	3.42	1.08	0.2
...
11	12.0	18	0.87	0.57	0.9
...
10	10.0	18	0.27	0.54	-1.3
...
3	9.0	18	-0.02	0.53	2.3
...
8	4.0	18	-1.58	0.62	-0.4
...
62	2.0	18	-2.54	0.79	-0.5
...
97	1.0	18	-3.36	1.06	0.4
25	0.0	18	-4.66	1.86	Minimum Estimated Error
Mean	10.5	18	0.55	0.68	0.0
S.D.	4.3	0	1.69	0.27	1.0

Note. Values shown represent only an illustrative sample of statistics from across the distribution of 114 students.

between ability and item difficulty. Two types of analyses are useful for this purpose: error and accuracy. The amount of error associated with each student is important for placing student scores in proper context. Error is influenced by a student's score relative to the number of items that have measured difficulty levels near that student's score. That is, more items with difficulty levels near the student's ability level typically decrease error. This reduction in error occurs because each assessment point at or near a student's ability level can add some reliability to the overall measure.

Standard error was calculated for each student, as shown in column 5 of Table 1. Error is also reported in logits and corresponds with each different student measure. Thus, error can be added and subtracted from each measure to yield a range in which each student's measure falls. For example, examinee #13's measure would fall between 2.34 and 4.50. Notice that extreme measures such as those of examinee #18 and examinee #25 have the greatest error due to the smaller number of items represented at the extremes.

In addition to error, accuracy can be examined with respect to the likelihood that a student's responses tend to fit with expectations. These expectations are based on the difficulty levels among items and the patterns of responses by students at the various item difficulty levels. For instance, we expect the high scoring students to usually

perform well on the easiest items. Similarly, we expect the low scoring students to typically perform less well than high scoring students on the most difficult items.

Accuracy of each measure is reported according to how well the measure fits the overall pattern of expected scores. It is this pattern of expected scores that characterizes the Rasch model. Accuracy is reported as *infit*, one type of weighted fit index that is sensitive to systematic misfitting student responses (see column 6 of Table 1). In general, scores that exceed standardized infit of 2.0 may be problematic in that they are beyond the accepted range of fit to be considered unidimensional with other items of the instrument. A misfitting item does not appear to represent well the construct being measured, judging from the pattern of responses to that item. Another type of useful and important fit statistic is *outfit*, which is an unweighted fit index that provides another helpful perspective on fit, particularly at the extreme values. Outfit analysis has similarities to the infit analysis so will not be illustrated in this article.

An information graphic known as a person pathway plot (Bond & Fox, 2007), shown in Figure 1, illustrates the fit (circle location) and error (relative circle size) for each student measure. The plot shows that most examinees had productive fit with the Rasch model. Four examinees were shown to underfit the Rasch model predictions (Examinees 3, 7, 26, and 48) with infit standardized

statistics above 2.0. The pattern of responses suggests that some of the performances of these examinees conflicted dramatically with scores that would be expected on the basis of item difficulties and examinee abilities. For example, for Examinee 7, the most extreme underfit to the model, the measure was near average at $-.02$ logits, but the examinee responded correctly to item 9 and 8, which were two of the most difficult items, while responding incorrectly to item 10, the easiest item. Examinees 3, 26, and 48 showed similarly unexpected response patterns, but to a lesser degree than that of Examinee 7. In sum, only 3.5% of examinees showed unexpected patterns of performance on the 18 items. Three examinees were shown to overfit the Rasch model (46, 58, 86) with infit statistics below -2.0 . Overfit of person measures indicates very highly predictable patterns of responses. This means that the examinee performances met expectations by matching the pattern of responding better than expected using the relative difficulties, which is not usually as problematic as failing to meet expectations. Excessive overfitting can, however, potentially mislead by inflating reliability values, so it should not be ignored. Excessive overfitting can also indicate redundancy among particular items which on some assessments may be undesired.

Item Difficulty Measures

When placing focus on an instrument's individual items, as opposed to the student performances, the item difficulty is an important component of meaningful measurement, as indicated by the discussion above. The difficulty of each item is based upon the sample of student performances being examined. This fact is crucial as different groups or samples of students are considered. Hence the larger and more diverse the sample of students, the more accurate and invariant the measurement of difficulty will tend to be.

Measures of difficulty for the 18 items ranged from -2.23 to 2.47 logits as shown in Table 2. No item values were extreme outliers. Difficulty of items ranged from 21% correct for item #10 to 88% correct for item #9. Thus no item was shown as too difficult or too easy for this sample overall. Standard error averaged $.25$ across the 18 items, ranging from $.22$ to $.33$. The item reliability was $.95$, supporting a wide range of item difficulties and a sufficient sample for this analysis. Difficulty data show that almost all (8 out of 9) of the most difficult items were among the initial items presented (#2 through #9), which does not seem ideal to us from a test design perspective.

Quality Control For The Assessment: Item Pathway Plots

As with the analysis of student performances, an examination of each item's fit relative to all other items

allowed us to understand whether the items were performing in a coherent, unidimensional way. That is, by fit we mean that we examined whether each item appeared to reflect the construct of interest, field dependence-independence (FDI), which the GEFT test is designed to assess.

Item fit statistics (Table 2) were reported as standardized scores which allow the level of 2.0 to serve as a quality control line. All of the 18 items were below or at the infit level of 2.0, indicating acceptable fit and correspondence to a unidimensional FDI construct from all items. An item pathway plot (Figure 2) illustrates that all 18 items showed productive fit with the Rasch model. However, items #4 and #6 were below the -2.0 standardized infit level, overfitting the Rasch model. This means that the items met expectations by matching the pattern of responding better than predicted using relative abilities, as noted above with person measures.

Item #5 was close to under-fitting the Rasch model just at the 2.0 level of the standardized infit statistic indicating some unexplained noise, but at an acceptable level. Future examination of this item is warranted by the near underfit and this possible concern.

Comparing The Assessment With The Students: Item-Person Map

By placing scores and difficulty levels on the same scale, another useful visualization tool known as an item-person map (left side of Figure 3) can be created. Along with the pathway plots described above, the item-person map allows efficient examination and interpretation of large amounts of data that even a modestly sized group can yield. Item-person maps can also be generated using solid bars rather than individual symbols representing each person or item.

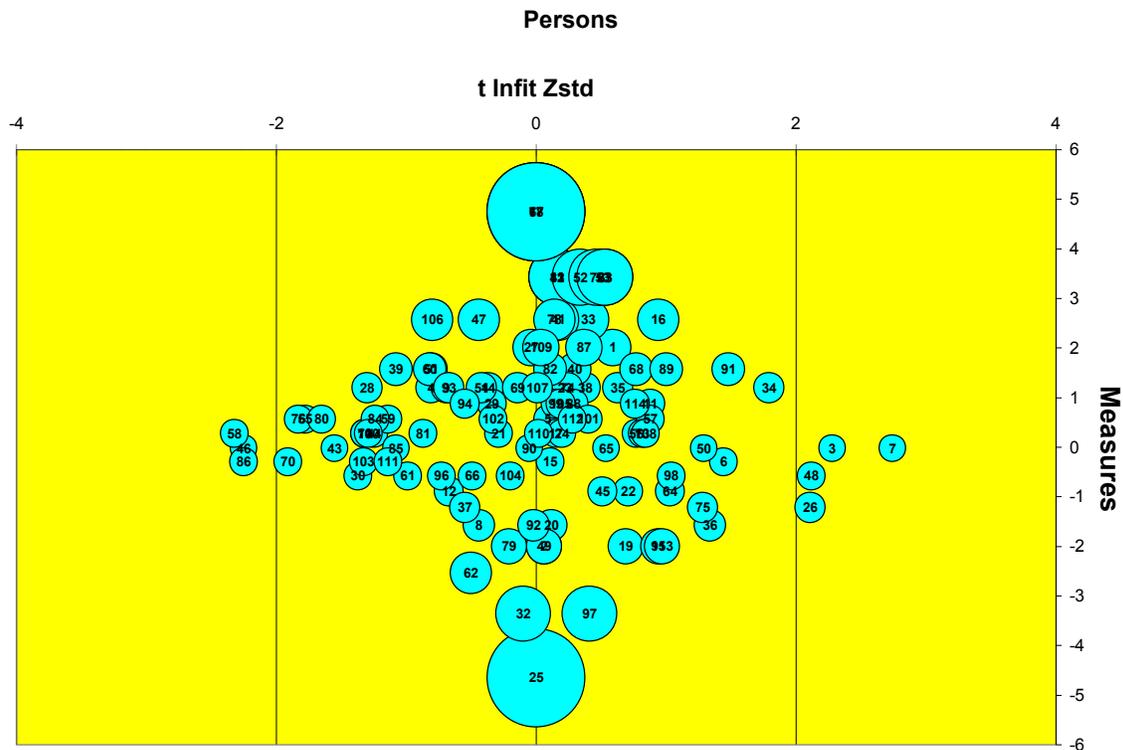
The item-person map shows a varied range in item difficulty with a small amount of duplication in items having similar difficulty levels (items #2 and #3; items #4 and #7) slightly above the middle range of all 18 items. Examinee ability levels are spread across the levels of difficulty with most examinees in the middle range and their abilities corresponding well with the distribution of item difficulties.

Still, 17 examinees (15%) were measured at ability levels above the difficulty level of item #9, the most difficult item. In other words, the probability was high that these 17 examinees would perform well on any of the 18 items, despite their imperfect scores. In addition, as noted earlier, three examinees earned perfect scores of 18 correct. These observations suggest the need for at least one item with greater difficulty than item #9 to help improve accuracy. On the other side of the measures, three examinees performed relatively lower than the difficulty level of item 10, the easiest item.

Table 2
GEFT Instrument Rasch Item Statistics in Ascending Measure Order for the 18 Items

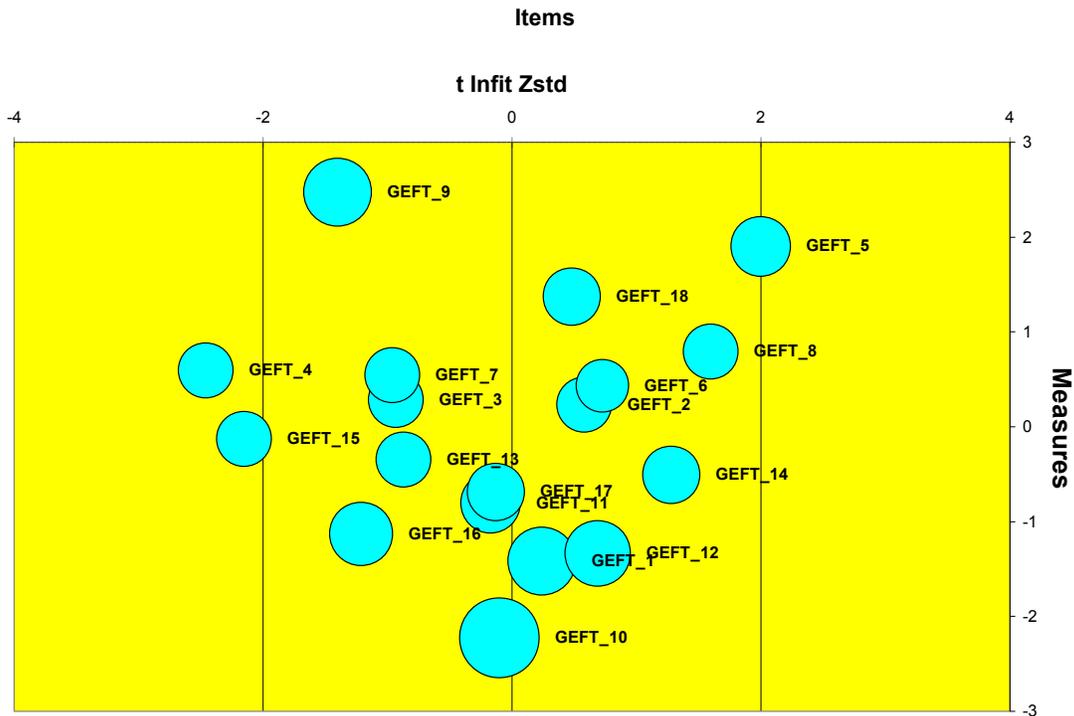
Entry Number	Total Score	Count	Measure	Model S.E.	Infit ZSTD
9	24.0	114	2.47	0.28	-1.4
5	32.0	114	1.90	0.25	2.0
18	41.0	114	1.37	0.24	0.5
8	52.0	114	0.79	0.23	1.6
4	56.0	114	0.59	0.23	-2.5
7	57.0	114	0.54	0.23	-1.0
6	59.0	114	0.43	0.22	0.7
3	62.0	114	0.28	0.23	-0.9
2	63.0	114	0.23	0.23	0.6
15	70.0	114	-0.13	0.23	-2.1
13	74.0	114	-0.35	0.23	-0.9
14	77.0	114	-0.51	0.24	1.3
17	80.0	114	-0.69	0.24	-0.1
11	82.0	114	-0.81	0.25	-0.2
16	87.0	114	-1.13	0.26	-1.2
12	90.0	114	-1.34	0.27	0.7
1	91.0	114	-1.42	0.28	0.2
10	100.0	114	-2.23	0.33	-0.1
Mean	63.5	110	0.0	0.25	-0.2
S.D.	20.3	0	1.17	0.03	1.2

Figure 1
Person Pathway for 114 Participants on the Group Embedded Figures Test (GEFT)



Note. Rasch measures (logits), standardized fit, and standard error (circle size) are plotted. A standardized quality control line of +2 is used to highlight those persons who underfit the Rasch model.

Figure 2
Item Pathway for 18 Items of the Group Embedded Figures Test (GEFT)



Note. Rasch measures (logits), standardized fit, and standard error (circle size) are plotted. A standardized quality control line of +2 is used to highlight those items that underfit the Rasch model.

This suggests some potential benefit to also including an item that is easier than item 10, depending upon the purpose of the FDI assessment.

As shown in Figure 3, the measurement scale accounts for the meaningful distinctions among performances toward the ends of the distribution while the raw score distribution fails to reveal these crucial performance distinctions. Specifically, on the right hand side of Figure 3 is a distribution of the raw scores that are not Rasch scaled. The red lines connecting this raw score distribution back to parts of the measurement scale distribution of those same scores (the item-person map on the left hand side) highlight the differences between the two distributions. On the left hand item-person map, distances between scores increasingly expand beyond one standard deviation above and below the mean, while on the raw score distribution distances between subsequent scores appear as the same amount.

A Test Item Diagnosis Tool: Item Characteristic Curves

For visualization of specific item performances, line plots of actual scores on each item can be created alongside the Rasch model's expectation of item-person

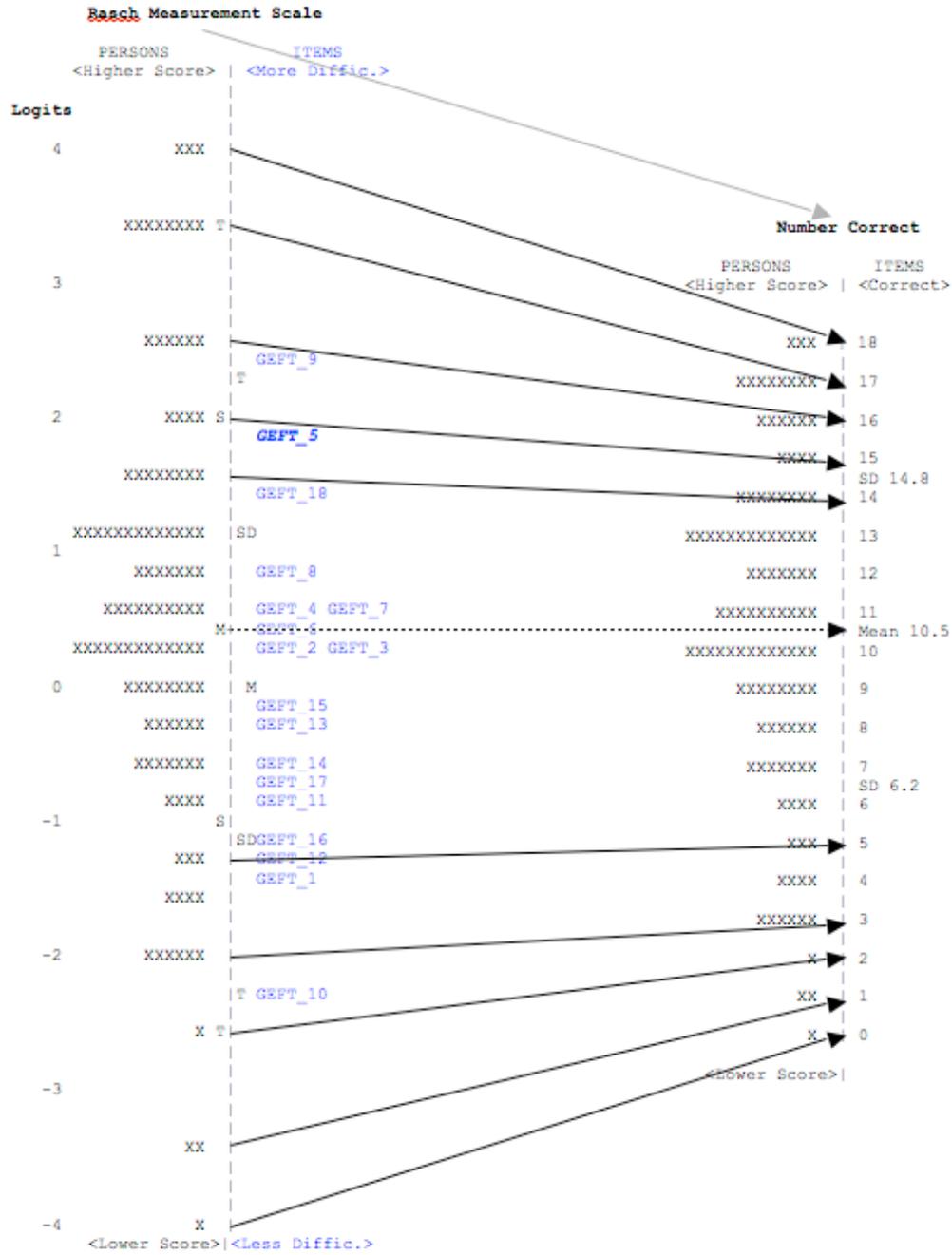
performance on GEFT (see Figure 4). The 95% confidence interval lines assist with the visualization of departures from the Rasch modeled expectations and their relative locations to lower, middle, or higher ability levels, from left to right on the item characteristic curve, respectively.

The example item characteristic curve of item #5 shows deviations from the 95% confidence interval lines. Item #5 was indicated previously for closer scrutiny due to near underfit of the model. The deviation from the empirical curve above the upper confidence interval line for lower ability levels illustrates the possible fit problem with item #5. This type of plot can be compared with the fit statistics overall, as well as with additional analyses and comparisons when alternative sample scores become available.

Measurement Quality: Item and Person Invariance

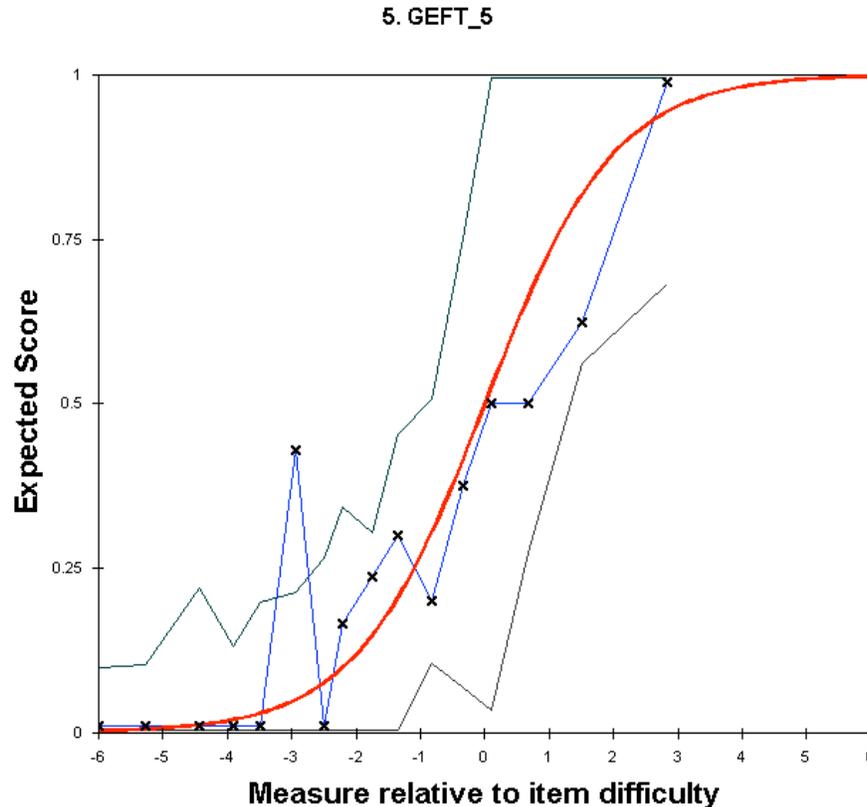
The idea behind the concept of invariance of estimates is that measures of items and students should not vary or differ excessively when either the items or people are divided up into groups of interest. To examine this crucial measurement requirement, two procedures were used that follow from the work of Wright and Stone

Figure 3
Item-person Map (left) and Number Correct Distribution (right) for 114 Examinees
on the Group Embedded Figures Test (GEFT)



Note. Arrow lines highlight the scale differences between the Rasch measurement scale constructed from scores versus those same scores on a traditional 'number correct' distribution.

Figure 4
*Expected (smooth) and Empirical (jagged) Score Item Characteristic Curves with
 95% Confidence Interval Lines for Item 5*



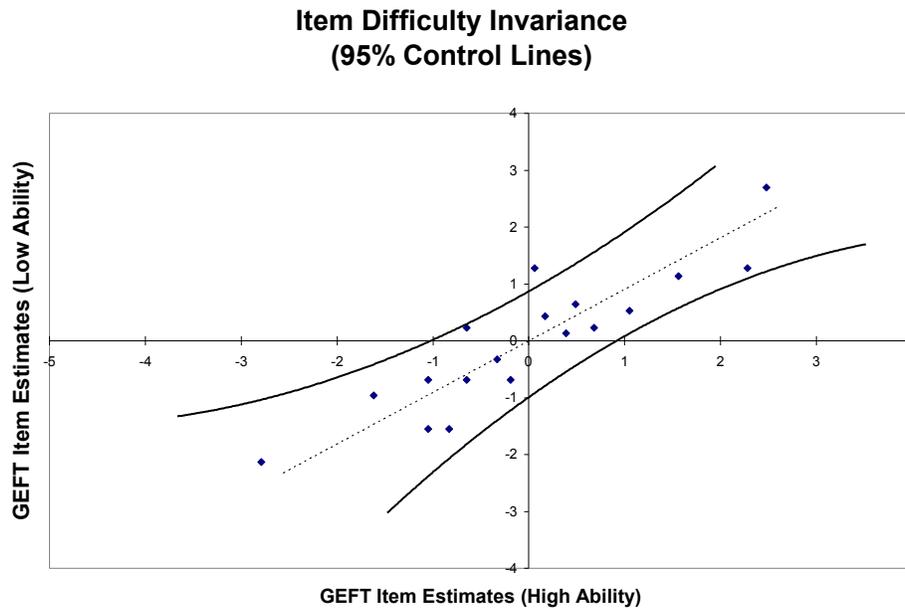
(1979). In keeping with the need to focus on both persons and items, the first procedure allowed for the analysis of item difficulty invariance while the second procedure allowed for analysis of person ability invariance. The following discussion and information graphic should clarify this concept further.

First, the examinee sample was divided into two groups according to ability. Item estimates for the high versus the low ability groups were then plotted along with 95% control lines (Figure 5). These control lines were based upon the standard errors and used to determine whether the plotted points were sufficiently invariant. Figure 5 shows that only one point lies outside the control lines, supporting the invariance, on the whole, for items on GEFT. That is, item points are near (allowing for error) the Rasch modeled dotted center line, representing invariance. Precision was reduced from the original analysis as reflected in the mean error rates for items equaling .31 for low ability and .41 for high ability versus .25 for all original students together.

Second, the GEFT items were divided into two groups according to item difficulty. Person/case estimates for difficult versus easy items were plotted with corresponding 95% control lines. Figure 6 shows that 46 of 52 points plotted were within the control lines. Of the 6 points plotted that were outside control lines, 5 were above the upper line and 1 was below the lower line. Although the precision of this comparison is relatively lower when 9 difficult versus 9 easy items were examined, person invariance is generally supported by the preponderance of items (88%) near the middle dotted line allowing for error. Again, precision was reduced from the original analysis as reflected in the mean error rates for persons equaling 1.12 for easy items and .95 for difficult items versus .68 for all original items together.

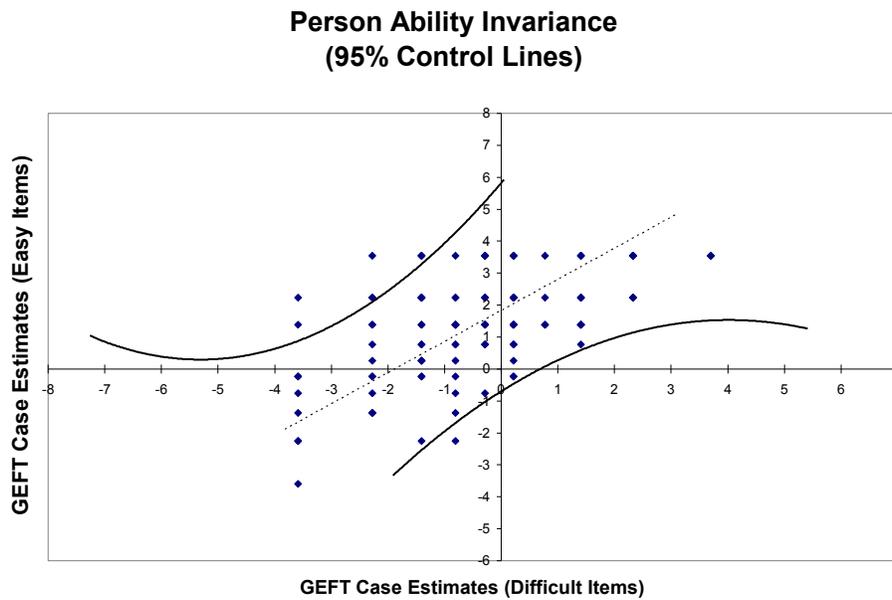
The reduction in the number of analyzed cases and items between these two invariance analyses also yielded lower person reliability estimates, as expected. Cronbach Alpha for the high ability analysis was .53, while that of the low ability analysis was .68. For the

Figure 5
Low Ability Examinee Versus High Ability Examinee Item Measures on the Group Embedded Figures Test (GEFT)



Note. Data plotted near the central dotted line and within the 95% control lines reflect item difficulty invariance allowing for error.

Figure 6
Less Difficult (easy) Item Versus Difficult Item Person/Case Measures on the Group Embedded Figures Test (GEFT)



Note. Data plotted near the central dotted line and within the 95% control lines reflect person ability invariance allowing for error.

difficult item analysis, Cronbach alpha was .76, while that of the easy item analysis was .78. These lower reliability levels highlight a limitation of using smaller participant sample sizes and a modest number of assessment items (e.g., 18) when dividing the sample or the items in half for analysis. Dividing the participant sample was particularly problematic for reliability. However, the outcome of these two procedures demonstrated that invariance analyses can yield useful preliminary findings even when participant groups of interest are closer to 50 than 100 in number, for example. Ultimately, these types of error and reliability estimates can help researchers decide whether their samples of participants and items are sufficient for meaningful interpretation of analyses for the context.

Summary of Findings

By examining a few of the general conclusions that follow from this analysis, application of these Rasch procedures to other data sets can be further considered. Overall, in our example analysis college sophomores who were seeking entrance to teacher certification programs were shown to represent a broad range of visuospatial abilities. Rasch analyses allowed us to identify with greater accuracy and confidence the relative differences among our students in field dependence-independence. This type of identification can, for example, lead to improved understanding among instructional faculty of potential challenges for particular students on certain pedagogical approaches such as those involving complex problem solving and complex spatial information (Angeli, & Valanides, 2004; Chen, & Macredie, 2004; Richards et al., 2002). The accurately measured differences among our students can be used to help anticipate the amount of support or the amount of challenge that might be necessary to facilitate learning growth among all our students.

The demonstrated diversity of this sample's visuospatial abilities also allowed for a useful examination of the 18 items that make up the GEFT instrument. We found that the addition of one or more items of greater difficulty is suggested by the 15% of examinees whose ability measure exceeded the measure of the most difficult item. Findings supported item and person invariance, and thus the potential for productive use of GEFT with this type of adult sample for working memory investigations and studies of learning, training, and instruction. All 18 items fit the Rasch model, though item #5 was close to underfitting the model, likely due to deviation from expected scores at the lower ability range. This general finding of fit indicates that the items are useful together as parts of this measure of field dependence-independence. However, further examination of item sequencing was suggested

by the imbalance in difficulty levels among items across the instrument.

For future comparisons using this instrument toward a continuing process of validation (Messick, 1995), individual statistics for both items and examinees were provided on logit measures, standard errors, point biserial correlations, and fit. Overall reliability indices were also generated. Information graphics that included pathway plots, an item map, item characteristic curves, and invariance plots allowed visualization of patterns within the statistics. These Rasch statistics and graphic can be useful for further examination of individual student performances and the efficacy of items. This analysis can also be used for comparisons with future Rasch analyzed performance data using different embedded figures tests such as HFT (Ekstrom, French, Harman, & Dermen, 1976) and similar instruments.

Furthermore, with the continued progress in understandings of perceptual disembedding, working memory functions (Miyake et al., 2001), and associated brain region analysis (Walter & Dassonville, 2007), the benefits of using, redesigning, and refining instruments such as GEFT were supported by this analysis.

Implications and Discussion

This illustrative study is one example of how powerful Rasch analytic tools can be meaningfully used with a relatively modest participant sample of interest. The ability to generate useful measures and other related statistics from samples of students is essential for many studies of teaching and learning where groups of interest are not extremely large. Although the 114 students used in this study may represent a larger sample than many single class sizes, it is also much smaller than the hundreds or thousands (Jones, Smith, & Talley, 2006) often needed for other types of contemporary latent trait analyses. The common measurement scale used in the Rasch approach provides interpretation advantages for instructors or researchers, particularly when compared with the many classical test approaches that lack error estimates and a common additive scale for both persons and items. The invariance analysis illustrated the deleterious effect on error and reliability when a group of 54 was used instead of the original 114 participants. Where possible and appropriate, combining student data from several classes who take a common assessment can be used to improve reliability and accuracy of measures.

As noted above, the Winsteps computer program is an inexpensive tool that works well with Microsoft Excel, and it also imports data from common statistical programs such as SPSS, SAS, R, and STATA. Winsteps also has a demo version called

Ministeps as well as a training version called Bond&FoxSteps (Linacre, 2006a), which complements a widely recommended Rasch measurement text (Bond & Fox, 2007) and features simple functions for creating invariance of estimates graphics such as those in Figures 5 and 6. Other Rasch computer programs worth investigating include Conquest, Facets, RASCAL, and RUMM. These programs can be very useful for exploring the possible analytic approaches described in the current assessment and measurement literature.

Rasch analytic approaches and visualization tools can be a beneficial means to improving instruments and ultimately the validity of measurements (Wolfe & Smith, 2007) that help lead to more precise understandings of issues involving student learning and the associated teaching applications. Classroom assessments of learning outcomes, rating scales, and surveys can also be analyzed using Rasch approaches. Note, however, that the different purposes among ability tests, surveys, and classroom assessments call for different models, assumptions, and uses of the measurement scales. For example, when analyzing surveys on student differences, instead of ability and difficulty one might focus on a person's agreeability and the test item's endorsability (e.g., agreement or disagreement with an attitude statement). In such an example, distributions of Likert responses or rating scales could be usefully examined with Rasch rating scale model that is sensitive to the inherent differences with these types of assessments (see Bond & Fox, 2007).

Other important applications can include pretest and posttest differences on classroom assessments of learning that allow for sensitivity to scale distinctions in change scores among low pretest performers versus those of high pretest performers (Dimitrov & Rumrill, 2003; Wright, 2003). By estimating measures of student performances as opposed to merely quantifying performances with ordered data that lacks legitimate additivity, both large-scale and small-scale studies of students can yield more comparable and thus meaningful information toward improved decision making and inquiry about teaching and learning.

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From the Classroom to the Coffee Shop: Graduate Students and Professors Effectively Navigate Interpersonal Boundaries

Harriet L. Schwartz
Carlow University

Determining and maintaining interpersonal boundaries with students is an ever-present yet rarely-discussed element of teaching graduate students. Where to meet students for advising appointments, how much to self-disclose in the classroom, and whether to collaborate with students on community projects – these are typical of the challenges that graduate school faculty encounter regularly as classroom teachers, and program, thesis, and practicum advisors. This article is based on a grounded theory study of relational practice between master's students and professors; while the study was not designed to explore interpersonal boundaries per se, participants discussed power, position, and boundaries, thus providing significant data to explore this topic. With positive relationship scholarship and relational cultural theory as sensitizing concepts, this study included in-depth interviews of 10 matched pairs of master's alumni and professors wherein each member of the dyad considered the relationship to be meaningful. Grounded theory dimensional analysis methods were used to analyze the data and identified categories including the following: professors' awareness of positionality, professors establishing boundaries, students' awareness of positionality, and students and professors working close to the boundaries. These categories were used to examine extant literature and propose an expanded understanding of interpersonal boundaries between students and teachers.

Questions regarding interpersonal boundaries between graduate students and professors take many forms, from the ethics of romantic or sexual relationships to more common concerns such as the appropriateness of meeting in a coffee shop rather than the office. While intimate relationships between students and professors can be addressed by organizational policy (Fairleigh Dickinson University, 2003; Rhodes College, 2004; University of Michigan, n.d.; University of Queensland, n.d.; Fairleigh Dickinson University Policy on Consensual Relations, 2003) more subtle boundary challenges are rarely part of the institutional dialogue. Yet for most faculty, routine boundary questions are a more present challenge than whether or not to date a student. In the course of an academic year, faculty members set boundaries regarding their availability to students, the locations of their meetings with students, and the degree to which they self-disclose in the classroom. These questions are not only questions of relationship and perimeters, but also of power and positionality; how do we as teachers acknowledge, define, and regulate our authority and position in relationships with students? This article explores questions of interpersonal boundaries between graduate students and faculty.

Barnett (2008), writing about mentoring relationships, provides a definition of boundaries that is relevant not just for mentoring, but also for other teacher/student relationships:

Boundaries are the basic ground rules for the professional relationship. They add a structure to mentorships that provides guidance regarding

appropriate actions and interactions for mentors and protégés. . . . Boundaries in professional relationships include dimensions such as touch, location, self-disclosure, gifts, fees, and personal space. Boundaries may be rigidly enforced, crossed, or violated. (p. 5-6)

Higher education researchers and writers who have considered interpersonal boundaries have typically begun by exploring boundary violations. Existing research and theoretical literature has addressed faculty and student perceptions of boundary violations in dual or multiple relationships wherein teachers and students share not only a learning relationship, but also a concurrent employment, financial, or sexual relationship (Barnett, 2008; Kolbert, Morgan, & Brendel, 2002). Elsewhere, seeking to assist professors, several educators have offered guidelines for faculty to assess boundary questions and situations in their relationships with students (Barnett, 2008; Buck, Mast, Latta, & Kaftan, 2009; Johnson, 2008; Sumsion, 2000; Tom, 1997). While existing literature has reviewed boundary violations and prescribed strategies for avoiding such violations, less has been written about professors and students who *successfully* navigate interpersonal boundaries. What do these healthy and ethical relationships look like from the perspective of teachers and students? Drawing from a grounded theory study regarding relational practice between master's students and professors, this article explores alumni and faculty perspectives regarding the effective navigation of positionality and boundaries in teaching relationships. Relevant categories (essentially, the themes that emerged using grounded theory analysis)

include the following: professors' awareness of positionality, professors establishing boundaries, students' awareness of positionality, and students and professors working close to the boundaries. Following the analytical process of grounded theory, these categories are then used to re-examine extant literature regarding teachers, students, and boundaries. In particular, I will revisit the work of Tom (1997), who proposes "The Deliberate Relationship," and Barnett (2008,) who presents a frame for viewing boundaries and suggests relevant strategies.

The Complexities of Distance

Seeking to avoid what some consider to be "the slippery slope" wherein boundary crossings more than likely lead to boundary violations, some professors establish an extended distance between themselves and their students (Barnett, 2008; Tom, 1997). However, educators argue that creating excessive distance in relationships with students serves to diminish the relationship (Baker, 1996; Barnett, 2008; Buck, et al., 2009) and increase the professor's power (Tom, 1997). "Avoiding all boundary crossings (and all multiple relationships as a result) also has the effect of withholding from others much of what makes the professional relationship the rich, rewarding, and valuable relationship that all hope it to be" (Barnett, 2008, p. 7). Moreover, Tom (1997) argues that a professor who maintains significant distance from students increases her or his position power and fails to equip students to deal with power differentials in relationships.

Professors, particularly those who work with adult students, have also attempted to deal with boundary issues by reducing their authority and the existing hierarchy, hoping to diminish the power differential and alter the boundary dynamics. Tom (1997) calls this attempt to minimize authority and power a denial response: the professor inherently has an evaluative and institutional role, as well as disciplinary expertise, and thus definitively holds power. Buck et al., (2009) in exploring teaching as a relational process, attempted to replace the teacher role with that of supportive friend or colleague, listening and encouraging rather than instructing. However, the role experimentation between an education professor and her students resulted in conflict. The professor recalled one student's response:

Her words made me realize that steps I took to eliminate my authority, not sharing my own teaching experiences or acknowledging that I did have expectations, actually meant that I was removing myself as a source of support and was threatening her with covert expectations. (Buck et al., 2009, p. 514)

Elsewhere, a professor teaching a women's studies class opted for a passive role in her classroom (Gardner, Dean, & McKaig, 1989). Her reduced presence led to a destabilization among students, wherein more knowledgeable students took on an authoritative role and exercised power over the others; this event then served to reduce the sharing of ideas.

A review of the literature regarding boundaries in graduate teaching relationships revealed both empirical and theoretical explorations of the topic, primarily pertaining to boundary violations and boundary assessment. In the following study, faculty and alumni provide their perspectives on working close to the conventional boundaries of teacher and student relationships. The study participants were not asked specifically about boundaries; however, as they discussed their relationships, topics such as time, meeting places, and self-disclosure emerged.

Background of the Study

This study, a doctoral dissertation (Schwartz, 2009), utilized grounded theory dimensional analysis to explore the following question: what goes on in relational practice between master's students and professors? This article focuses on data relating to boundaries, positionality, power differentials, and friendship. In shaping this study, I made a conscious decision to explore relationships that students and faculty considered to be positive; this approach is consistent with positive psychology and positive relationship research (Cameron, Dutton, & Quinn, 2003; Dutton & Rags, 2007; Fredrickson, 2009; Keyes & Haidt, 2003), as well as relational cultural theory (Jordan, 2010; Miller & Stiver, 1997).

Positive relationship research is based on the positive psychology premise that there is value in studying relationships that are essentially affirmative. This research domain does not deny or ignore the existence of conflict and challenge in relationships; in fact, positive psychology includes the study of resilience, which inherently acknowledges the possibility for difficulty in relationships (Cameron, et al., 2003; Dutton & Rags, 2007; Fredrickson, 2009; Keyes & Haidt, 2003). The last decade has seen an increase in scholars applying positive psychology to understanding workplace relationships. "PRW (positive relationships at work) examines the conditions, processes, and mechanisms in organizational relationships that increase the capacity for growth, learning, generativity, and resilience in individuals, groups, and organizations" (Dutton & Rags, 2007. p. 3). These same outcomes are central to the ideals of higher education and thus position positive relationship research as a valuable starting point to further our understanding of teaching and learning.

Relational cultural theory is another framework that has rarely been used as a foundation for considering teaching and learning. However, similar to positive psychology, relational cultural theory (RCT) provides a frame that is immediately relevant to effective teaching and learning: increased energy, creativity, productivity and sense of self worth (Jordan, 2010). RCT suggests that people grow and develop through their relationships with others and that this growth-in-relation is mutual (Jordan, 2010; Miller & Stiver, 1997). RCT proposes five elements of healthy growth-fostering relationships: increased zest, increased knowledge, an ability to take action, increased self-esteem, and a desire for more connection (Jordan, 2010; Miller & Stiver, 1997). Similar to positive psychology, RCT acknowledges the importance of “good conflict” (Jordan, 2010, p. 4) and also seeks to replace power-over with power-with (Jordan, 2010; Miller & Stiver, 1997), an idea that mirrors the goal of some adult educators who seek to reduce – though not eliminate – the power differential between graduate students and professors (Tom, 1997).

While relational cultural theory has not been widely applied in higher education, the role of relationships has been explored in undergraduate mentoring (Liang, Tracy, Taylor, & Williams, 2002), graduate education (Buck, et al., 2009; Rossiter, 1999), and faculty work life (Gersick, Barunek, & Dutton, 2000; Pololi, Conrad, Knight, & Carr 2009).

Method

This study utilized grounded theory methods to explore the question, what goes on in relational practice between master’s students and professors? It was from that broad question that specific data and theory regarding boundaries emerged. As I constructed this study, I drew methodological guidance from the grounded theory approach developed by Kathy Charmaz (2002, 2006). Building on the founding principles of grounded theory as it was first developed by Barney Glaser and Anselm Strauss, Charmaz proposed a constructivist approach. Whereas Glaser and Strauss held a post-positivistic view, Charmaz proposed the idea that creating theory is inherently an interpretive act (Charmaz, 2006). Grounded theory positions the researcher to build “increasingly abstract ideas about research participants’ meanings, actions, and worlds” (Charmaz, 2002, p. 508) and this process and interpretation makes grounded theory practical in the analysis of relationships (Charmaz, 2002). Grounded theory has been used to explore graduate advising (Bloom, Cuevas, Hall, & Evans, 2007), undergraduate

mentoring (Pitney & Ehlers, 2004) and authenticity in teaching (Cranton & Carusetta, 2004).

Participants

As a grounded theorist, I began with purposeful sampling (Charmaz, 2006), a grounded theory approach which calls for the researcher to seek participants who are relevant to the research question. Working through my extended network, I sought participants who were able to identify an alumnus or faculty counterpart with whom they “had a meaningful academic relationship.” If the counterpart agreed to participate in the study, I arranged interviews. Participants were informed of the parameters of participation and informed consent. After purposeful sampling, I considered theoretical sampling; however, the data did not indicate theoretical propositions that needed to be addressed through more defined sampling, and thus I continued to seek participants using the original parameters.

I interviewed 10 matched pairs of master’s professors and recent alumni; professors and alumni were interviewed individually. Master’s students were defined as adult students who were at least 25 years old when commencing graduate study. I interviewed recent alumni rather than current students to avoid intervening in ongoing evaluative teaching relationships. Professors were defined as anyone teaching at the master’s level. The matched pairs originated from five social science master’s programs located in the United States, including the mid-atlantic region and New England. The professors ranged in age from 39 years old to 78 years old. Alumni ranged in age from 27 years old to 52 years old. The matched pairs included all gender combinations. I reached saturation after the twentieth interview which completed the tenth matched pair. Saturation is reached when the recently-gathered data provides no new properties (Charmaz, 2006; Glaser & Strauss, 2008). Several times throughout the research process, I confirmed my initial decision that I had reached saturation by revisiting whether data suggested new properties; saturation is reached by “joint collection and analysis of data” (Glaser & Strauss, 2008, p. 61).

Interviewing

Grounded theory requires the interviewer to refrain from relying on an interview guide or list of predetermined questions, but rather to begin the interview with one question and then craft follow-up questions in the moment (Charmaz, 2006, 2002). My opening question was, “How have you come to know professor X?” or “How have you come to know

alumnus Y?" Interviews typically lasted between 40 and 50 minutes.

Coding

In initial coding, I remained close to the language used by the participants, naming words, lines, or segments to begin organizing the data and developing notions of analytic possibilities (Charmaz, 2006). I considered all professor transcripts as a group and all student transcripts as a second group. Thus each transcript was coded only in relation to other transcripts in its group, and the codes that I developed were group-specific. Initial coding generated 1081 descriptors; I then used axial coding to explore relationships in the coded data. Later in the process, I engaged in focused coding in order to "synthesize and explain larger segments of the data" (Charmaz, 2006, p. 57). Additionally, I worked with a coding partner and a coding group; their observations and responses to the data helped to challenge my perspectives and open my thinking to aspects of the data which did not initially strike me as important. This collaborative process created a space wherein I could think out loud as I made my way through the data.

Analyzing the Data

"What 'all' is involved here?" (Schatzman, 1991, p. 310) is the central methodological question of grounded theory dimensional analysis and drove this study: what all is involved in relational practice between master's students and professors?

Following the methods of grounded theory, the codes that emerge from the interview transcripts are organized into clusters of related codes or trees. These trees are then named using abstract conceptual terms called categories (Corbin & Strauss, 2008). These categories are the basis of the dimensions which allow for the conceptual analysis and modeling of the data. It is important to recognize that all dimensions ascended directly from the coding process that began with the participants' own words.

Findings

As noted previously, this study was a doctoral dissertation. Through this research, I created a visual model of relational practice between master's students and professors, and I also developed a composite narrative. In addition, I advanced several theoretical propositions relating to elements of relational practice such as energy, mutuality, identity, boundaries, and connection. A full review of the analysis and findings of this study is beyond the scope of this article but is available online

(http://etd.ohiolink.edu/view.cgi?acc_num=antioch1247833338). Instead, the remainder of this article will provide professor and alumni reflections relevant to issues of positionality and boundaries. All of the following reflections were among the data that formed the categories in the analysis. Again, the full model is not reported here in order to allow for the intended focus on boundary-related content. Drawing from the emergent categories, I will explore professors' awareness of positionality, professors establishing boundaries, students' awareness of positionality, and students and professors working close to the boundaries.

Professors' Awareness of Positionality

The professors in this study exhibited an awareness of their positionality as they discussed the following: balance in the relationship; the classroom and more specifically, the front of the classroom, as symbols of position; and transitioning the relationship. Implying a sense of balance, one professor described her wish to be authentic and informal; at the same time she noted that the informality must still be professional. Another professor described maintaining respect for his students while also keeping clear boundaries:

My personal approach, ah, is that I'm dealing with adults. And you need to treat them as adults. I need, as the instructor, to maintain a respect. I cannot and do not try to be part of the cohort in the sense that they are. I can never, ah, and should never even try to become an equal to them. But on the other hand, I have to meet them where they are. (Professor 4)

Professors also referenced the classroom as an indicator of position. One professor noted that she tells her students that although she "stands in front of the classroom" (perhaps a sign of her position and expertise), she recalls the challenges she faced as a student. Other professors discussed meeting with students outside of the classroom to get to know them better and deepen the academic relationship. Finally, one professor indicated his sense of teacher-student boundaries and position, as he discussed the potential evolution of a relationship: "I guess once somebody graduates and they become your colleague, they can also become a good friend down the line. We talk long term" (Professor 3).

Professors' Establishment of Boundaries

The professors in this study set boundaries by remaining conscious of the evaluative component of the relationship. They articulated clarifications of role, that

even among all the other aspects of the relationship, each remained a teacher in the life of a student. Several professors identified limits to the relationship, clarifying what does *not* go on in the relationship. Professors indicated a variety of limits with students: not venting, not gossiping, not talking about other professors, not inviting the student to the professor's house individually, and not moving in each other's social circles.

At least a few of these professors acknowledged that close relationships with students present boundary challenges. None of these professors described struggling with boundaries. Moreover, the professors' descriptions of elements of friendship indicate that these professors are able to expand or at least push against more conventional ideas about boundaries and student/teacher relationships.

Variations on friendship were present in several of the pairs who participated in this study. Often for these professors, the notion of friendship meant that the professor and student or alum would share personal as well as academic and professional matters. In one case, a professor stated that her friendship with the alumnus was no different than friendships she has with other people who were not her students. However, in most cases there was still a different boundary in these friendships than in friendships between these professors and non-students:

I wouldn't talk with her about relation – my own relationship issues in detail. [I: Okay.] I'm recently divorced, and will joke about, you know, there aren't any good men out there. But I wouldn't necessarily talk to her in detail about things. (Professor 3)

Students' Awareness of Positionality

Students described an awareness of positionality, acknowledging that student and professor were neither peers nor equal in power. Yet this awareness also reflected a connection and mutuality that reduced, but did not disintegrate hierarchy and distance. The image of the professor in front of the classroom sometimes served as a metaphor for distance to be maintained and sometimes overcome:

[This seminar] was very – a very different experience. It's like – I mean, it's the difference between like somebody who's sort of sitting above you, and telling you what you don't know yet, and somebody sitting down with you and you're having a discussion. (Student 7)

Another element of positionality is the students' awareness of boundaries. Students voiced a clear sense of boundary, often articulated by what *would not* happen between student and professor, such as “I wouldn't ask

him to get a beer,” or “I wouldn't have him over for a cook-out.” Students also mentioned an awareness that the professor exists in the campus community of other professors and an awareness of potential political issues among faculty. One student described how boundaries strengthen the relationship:

I've never thought of it this way, but the boundaries that sort of – I think maintain that safety for taking risk. We're not best friends, you know what I mean? We're – I am here to learn. I'm paying a tuition, and there is an expected outcome of that. You're expected to support me through this process, and I'm expected to do my papers, and get my stuff in on time, and do my work, and work hard. (Student 9)

Students also recognized boundaries implied by physical space. Students and professors met in a variety of spaces including, of course, the classroom and the professor's office. Students also reported meeting with professors off campus, typically “for coffee.” Other students described visiting a professor's home as well as gathering around a campfire at a summer program. While it seems obvious that different settings create different tones, I think it is worth noting ways in which these spaces helped shape students' experiences with their professors. The classroom and office convey a feeling of formality and seriousness: “She's always made me feel like she is that – she is sort of in charge of my destiny in a way, in that, in that office” (Student 3). Connecting outside of the office shifts the mood and allows for a more personal connection:

The other thing that he did, um – sometimes we would have a – we did this (class) on a Friday night/Saturday, and we would have a Saturday lunch. Not always, but periodically we would like all walk together down to Panera or something for lunch, and he would walk with different people and chat – chitchat, and then, you know, walk back and chitchat. So, just that – not just the classroom relationship, but the outside end of class. (Student 10)

In addition, visiting a professor in her or his home extends the personal nature of the relationship:

And I mean she has sometimes had some dinner parties and things at her house and I would go to those, and then I got to know her and I would see her interact with her family and things like that. (Student 6)

These three examples are not presented to imply that settings create definitive climates or boundaries. Clearly, a student and professor can connect on a personal level even in the classroom or office, and an

off-campus meeting might feel just as formal as one in the classroom. Nonetheless, these students reveal ways in which space adds to the context of the relationship.

Students and Professors Working Close to the Boundaries

A subset of professors in this study told powerful stories about relationships with students that expanded these professors' individual worldviews. In these cases, the professor and student came from significantly different backgrounds and communities. The student revealed aspects of her or his culture and community initially through papers and class discussion. This work led to deeper dyadic conversations in which the student shared even more deeply and the professor acquired greater insight. In two cases, the professor and student eventually arranged to meet in the community. In this first case, the student was part of an underground alternative community. She was exploring approaches to help this community vis-à-vis mental health issues. She invited the professor to attend a community meeting with her. The professor recounts that meeting:

I knew when I first met her that I had a lot to learn from her. And so, umm, that was a real gift that she gave me, to even invite me. It meant a lot to me that she trusted me to do that, to go there with her, and to open that up. Umm, so it was role reversal. I felt like, umm, umm, I didn't want to embarrass her, you know, that kind of thing. [I: Yeah.] Umm, I just wanted mainly to be quiet and observe and listen and if anybody had any questions or comments that they could ask me, but I didn't want to go in as the expert. I wanted just to be somebody who was there, as her guest. You know, that's – and I was real comfortable. I did not want to be like a speaker or anything like that. I really was going as her guest, as her invited guest. (Professor 3)

The professor and student later discussed the student's interest in community mental health. The professor clarified that while she was willing to serve in an advisory role, she declined to stay directly involved with the project, seeing it as the student's domain. Elsewhere, another professor and student also connected around the student's community work and the professor's involvement within his church:

We have a men's group here at the church that meets once a month and it's Saturday morning. I asked him to come over and talk to the guys 'cause I just thought there was a message that, ah, he could carry on the marriage of love and concern, the marriage of – a message of growth and, ah, it

just worked out very, very well. And in fact, umm, and it's helped his ministry because our pastor, umm, has been able to put him in contact with some people and some situations that have been very helpful to growing his youth ministry, or young men's ministry. So it's been very rewarding. (Professor 8)

In several cases wherein either the professor or student remembered experiences that indicate working close to the boundaries, such as the examples above, the professor or student also recalled the continuing evaluative or mentoring role played by the professor. In one pair, the professor had invited the student to attend dinner parties at her house, and she continues to do so now that he is an alumnus. The following quote from this professor does not seem particularly noteworthy in its content: the professor recalls speaking with the alum who has in turn become a college professor, pushing him to be more active professionally. However, the tone conveyed by her words is telling. Note the last sentence of the quote:

And I still think he needs – he needs to do some publication now, to keep his academic job. And that's one of the things we talk about when I meet with him as well, what are you working on? Get to work on it. (Professor 6)

Alumni from other pairs spoke of friendships with their former professors, and in discussing friendship, they revealed an interesting tension between wanting to expand the boundaries of the relationship while also wanting to preserve its essence:

You know, I guess I'd say, it is more of a professional friendship, you know. It isn't that I can call him up and say hey, let's go have a beer. You know, it hasn't developed that, you know, into that. Or hey, let's go to the football game, or umm, hey, I'm cooking out – can you come over? It hasn't developed into that. Yet. Would I like – would I like that? Heck, yeah. You know, every opportunity that I have, you know, to sit and talk to him, you know, I would love to have that opportunity. (Student 8)

While some students yearned for a more personal or casual relationship, at the same time they regard it as having something extra that purely social friendships do not contain:

I guess that, that it's no – notably different than the other relationships I have with that connection because those are more like friends. And this feels like a friendship but much more. (Student 3)

Discussion

The relevant categories or concepts that emerged from the data in this study connect to several ideas found in the theoretical literature regarding teachers, students, and interpersonal boundaries. Specifically, findings in this study provide illustrative support for boundary strategies suggested previously in the theoretical literature by Tom (1997), Sumsion (2000) and Barnett (2008). In addition, a theoretical proposition which emerges from this study also serves to challenge assertions made by Johnson (2008) and to expand Barnett's (2008) view of boundaries in teacher/student relationships.

First, the findings in the professors establish boundaries category reveal awareness and intentionality that support Tom's call for presence and authenticity. The professors in this study were clear about their boundaries with students, stating for example that they would not vent, gossip, or talk about other professors with students. Also recall the professor quoted earlier who said she would joke about "looking for a man" but wouldn't discuss her relationships in detail with her students. This intentionality echoes Tom (1997):

In the deliberate relationship, there is a pause between the experience of an impulse and its expression. In that pause, however brief, we interrogate the impulse: Does it serve the long-term obligations of the relationship? If the answer is No, we refrain. In this way, the thoughts and feelings expressed in the deliberate relationship are both genuine and controlled. (p. 12)

These findings also affirm the approach taken by Sumsion (2000) who, building on Tom's (1997) work, sought to find an appropriate level of caring and engagement vis-a-vis students and their problems while also maintaining her role as a teacher evaluating student work. The current study revealed examples of professors who cared deeply for their students while also maintaining their roles as evaluators. Relatedly, the current findings challenge Johnson's (2008) suggestion that as mentors and proteges develop increasing mutuality and collegiality, mentors may be less able to objectively evaluate students' work. This study did not explore that question per se; however, students in the study reported feeling challenged by their professors, and professors reported a clear awareness of their roles.

Elsewhere, Barnett (2008) suggests that professionals draw upon the virtues of beneficence, non-maleficence, fidelity, autonomy, and justice when considering boundary questions. Barnett later offers specific recommendations for both faculty and academic administrators regarding boundaries in mentoring and multiple relationships. The stories told by the professors

who engaged with their students in the community serve to illustrate Barnett's proposed strategy. For example, the professor who attended a community mental health meeting with her student was careful to maintain her position as a guest at the meeting and not take on her professor role. Further, she clarified that she would be willing to advise her student in the future regarding the community work, but that she would limit her involvement, thus respecting the student's autonomy.

Finally, findings of this study present an alternative view of boundaries. Barnett (2008) suggests that boundaries are either observed, crossed, or violated. I propose a fourth position that we, as professionals, can choose regarding boundaries and that is *working close to the boundary*. Meeting in non-traditional settings, allowing meetings to run overtime, and the sharing of a mentor's personal information with a protégé are all boundary crossings, according to Barnett. However, if boundaries indicate appropriateness in professional relationships (Barnett, 2008), I suggest that sharing a story with a protégé regarding one's own graduate school struggles is not crossing the boundary; in the context of the relationship, this can be appropriate ethical behavior. Using Tom's (1997) framework suggests that sharing this kind of story can serve the student and the relationship; the professor does not share this personal information because she needs the student's support, but rather to attempt to validate the student's struggles. The students in this study, who shared stories that would qualify as a professor working close to the boundaries (for example, meeting off campus, sharing personal-professional stories, and working together in the community), indicated that they felt challenged, respected, and encouraged. These students did not describe feeling as if a line had been crossed, but rather that a relationship and their learning had been enriched.

One student reflected on her enhanced view of authority. She entered her master's program having had little meaningful connection with people in authority and doubting the potential positivity of those connections. Her work with her professor shifted her perspective. Reflecting on the relationship, the student commented: "It's changed the way that I think about people. It's changed the way that I think about how – how you can connect when there's a difference in power" (Student 3). This student's comment recalls Tom's (1997) assertion that by resisting the urge to deny or widen the boundary with students, professors help students learn how to navigate power differentials.

Another student remembers believing that her professor knew her and her classmates well and that this knowing facilitated deeper teaching and learning:

I think definitely the way she operates in the classroom, um, like the no-nonsense approach with the soft hands, and how she pushes her students,

and it's like she knows how far she can push you, and she knows what your limitations are, um, because I think, like, you learn so much more that way. You learn more about yourself, your limitations, and what you can do, and what you can't do. (Student 2)

As professors, we have learned to be cautious about boundaries. There are the obvious boundary concerns, such as engaging in inappropriate relationships, and so being careful to manage these boundaries is vitally important. However, this study helps us explore more subtle boundary issues. To what degree does self-disclosure bring humanity to the relationship and what is the tipping point at which it shifts the focus from the student's needs to the professor's? To what degree can we self-disclose and still maintain our position as the holder of the relationship? When does a change of venue (e.g., meeting off campus) strengthen the bond and when does it confuse the relationship?

While this study focused on graduate students, perhaps the findings can also help us think about boundaries and undergraduate students. While a full exploration of this topic is beyond the scope of this article, a few themes emerge. First, regarding self-disclosure, increased and intentional self-disclosure of our own academic journeys may help our students progress to more mature understandings of the academic process. For example, sharing stories of how we came to hear a professor's feedback as a challenge to be better rather than as a personal affront could help our own students make the same transition. Similarly, sharing stories of those critical moments when we came to see ourselves as co-creators of knowledge rather than receivers of information may help our students start to imagine themselves as active co-learners. Finally, while the stories of adult students in this study contributed to our understanding of working close to the boundaries, traditional-aged undergraduates bring a different set of expectations and worldviews that will challenge our conceptions of boundaries. Undergraduates bring long-standing constructs such as their personal and generational views of power and authority, as well as newer realities such as evolving views on availability and privacy in the 24/7 digital world.

When beginning this study, I did not intend to explore boundaries per se, meaning I did not shape the study with boundaries in mind. Nonetheless, boundary-related categories emerged from the data, providing empirical support for previously-proposed theoretical ideas regarding boundaries (Barnett, 2008; Tom, 1997). Future research might explore student and faculty perceptions and experiences of boundaries more directly. This study took a positive psychology perspective and focused on healthy relationships.

Again, avoiding the obvious boundary violations of inappropriate relationships, future research could explore more subtle experiences of boundary confusion or boundary missteps and adjustments both from teacher and student perspectives. In addition, future studies might seek deeper understandings of students and professors who engage in healthy and ethical relationships in which they work close to the boundary. When pushed to consider this dynamic more directly, how would professors describe their thinking and decision-making? How would students describe their experience of the learning space created when working close to the boundaries in a context of trust and respect?

In conclusion, this study deepens the dialog regarding interpersonal boundaries between teachers and students. While previous studies and writings have considered multiple relationships and boundary violations (Barnett, 2008; Johnson, 2008; Kolbert et al., 2002), this study, emerging from a positive psychology perspective, provides a view of students and professors who effectively and ethically navigate questions regarding interpersonal boundaries. By working close to the boundaries intentionally, these teachers and students enhance the mutuality of their learning relationship and, perhaps more importantly, deepen the potential for the student's intellectual risk-taking and development.

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Internationalization of Higher Education: Preparing Faculty to Teach Cross-culturally

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The need to effectively prepare faculty to teach in a cross-cultural environment has become imperative in the context of globalizing higher education (Deardorff, 2009; Verbik, 2007). Many higher education institutions around the world have internationalized their degrees and programs, and they have established foreign branch campuses to provide their intellectual resources in other countries (Altbach, 2010; Armstrong, 2007). In this paradigm, faculty members are contracted from the home campus or from an outside organization to teach in the foreign branch, but they receive little formal preparation to teach in this type of environment (Lewin, 2008; McBurnie & Ziguras, 2007). Faculty members are unaware of culturally competent pedagogical strategies on how to respond in culturally sensitive ways, and thus they lack the ability to successfully communicate and work with learners from other cultures (Paige & Goode, 2009). This paper focuses on preparing faculty to teach cross-culturally at international branch campuses. Using Darla Deardorff's process model of intercultural competency, I will develop a framework that focuses on three core elements of Deardorff's process model—attitudes, knowledge and comprehension, and skills—that will help faculty members to teach internationally. In the paper's conclusion, I will suggest best practices and discuss the implications of intercultural competency for transnational teaching.

“Internationalization” in the context of higher education is understood in a variety of ways. It can be interpreted differently depending on various stakeholders, such as governments, educational institutions, governing boards, faculty members, and academic programs (Zolfaghari, Sabran, & Zolfaghari, 2009). For instance, Ellingboe (1998) explains that internationalization is a complex process of integrating an international perspective into a higher education institution “that involves many stakeholders working to change the internal dynamics of an institution to respond and adapt appropriately to an increasingly diverse, globally focused, ever-changing external environment” (p. 199). In the same vein, Zolfaghari, Sabran, & Zolfaghari (2009) describe the internationalization of higher education as the “integration and infusion of an international dimension as a central part of a university's programs” (p. 5). This process may include reforming the curriculum in order to reflect an international scope, or it may encompass international research activities. This paper is based on Knight's (1999) comprehensive definition of the internationalization of higher education as “the process of integrating an international/intercultural dimension into the teaching, research and service functions of the institution” (p. 16) and will focus on one stakeholder – the faculty member.

Many universities have engaged in the internationalization of higher education through transnational education initiatives (Altbach & Knight, 2007). One of the main manifestations of transnational education is the branch campus, which is a joint venture between two higher education institutions and involves the transporting of programs and degrees from one country (the home country) to another (the foreign

country) (McBurnie & Ziguras, 2007; Verbik, 2007). Universities are ready to internationalize higher education in order to respond to the current educational climate by infusing diversity into their student population, interacting with multicultural populations, and creating an international learning experience (Greenholz, 2000; Otten, 2003; Wang, 2008).

Within the branch campus model, faculty members fly in from the home country to teach students in the foreign country, which is known as *transnational* teaching (Smith, 2010). Transnational faculty members are hired to provide their expertise in a specialized area, or they are called upon to enrich the offerings in the foreign branch institution (Bodycott & Walker, 2010). McBurnie and Ziguras (2007) point out that faculty members generally have a demanding schedule since they must simultaneously manage their courses at the home campus while teaching intensive blocks of classes at the branch.

International teaching opportunities such as these have increased due to the lucrative business ventures that many universities have undertaken in order to internationalize their higher education degrees and programs. However, faculty members are not sufficiently prepared by their institutions to meet these challenges (Bodycott & Walker, 2000; Crabtree & Sapp, 2004; Dunn & Wallace, 2006; Hollis & Guzman, 2005; Leask, 2008; Smith, 2010; Teekens, 2003). Many faculty members do not receive sufficient preparation to teach students from diverse populations in international branch campuses, let alone formal intercultural competency training (Smith, 2010; Wang, 2008). For instance, in a study of lecturers from three North American universities, none of the participants were involved in pre-departure training for transnational

teaching (Gribble & Ziguras, 2003). If transnational faculty members do receive cross-cultural teacher training, it is often basic and generalized, and it deals with student learning styles, rather than helping faculty members gain the competencies needed to negotiate other cultures (Gribble & Ziguras, 2003; Leask, 2008, Otten, 2003).

Organizations have been created to monitor transnational teaching, such as the Global Alliance for Transnational Education (GATE), which has generated standards stipulating that transnational faculty members must have the appropriate expertise and intercultural awareness to teach in transnational environments (Greenholz, 2000). However, the extent to which these requirements are being monitored is unclear. Moreover, little scholarly research, with the exception of anecdotal information and isolated experiences shared at conferences, has been conducted in regards to how transnational faculty members develop the necessary skills to teach in cross-cultural environments (Gribble & Ziguras, 2003; Smith, 2010). It is evident that intercultural teaching standards are not being adequately monitored, resulting in the fact that transnational faculty members receive inadequate intercultural preparation to teach in branch campuses.

This lack of research in regards to preparing faculty to teach cross-culturally in international branch campuses is surprising given that teaching faculty members are the “primary facilitators of students’ learning” (Johnson, 2003, p. 22). If they are not prepared to teach in a cross-cultural, globally diverse setting, then how can they provide an equitable educational environment for their students? In this paper, I will focus on preparing faculty to teach cross-culturally at international branch campuses. Using Darla Deardorff’s process model of intercultural competency, I will develop a framework that focuses on three core elements of Deardorff’s process model—attitudes, knowledge and comprehension, and skills—that will help faculty members to teach internationally. In the paper’s conclusion, I will suggest best practices and discuss the implications of intercultural competency for transnational teaching.

Process Model of Intercultural Competence

According to Deardorff (2009), intercultural competence is defined as a person’s ability to interact effectively and appropriately in cross-cultural situations based on his or her intercultural attitudes, knowledge and comprehension, and skills. Deardorff depicts intercultural competence, like the definitions offered in recent discussions, as a non-static process that involves the recognition of being in a particular cultural context, the appreciation of cultural differences, and the development of general strategies to adapt to cultural

difference (Bennett, Bennett, & Allen, 2003; Paige & Goode, 2009). Deardorff’s definition is also in agreement with that of Hiller & Wozniak (2009), who argue that being intercultural competent means having the capacity to be sensitive to other cultural systems and the ability to approach cultural “others” without feeling insecure or threatened.

Deardorff’s process model of intercultural competence was developed using a grounded theory approach by surveying experts in the field of international education in the United States in order to develop a consensus of what constitutes intercultural competency. The elements that the experts agreed upon were classified and placed into a framework of three core elements through which to acquire intercultural competence: (1) attitudes, (2) knowledge and comprehension, and (3) skills (Deardorff, 2009). Based on these findings, Deardorff argues that one can enter the process of developing intercultural competence at any point, but she also highlights that attitudes are a significant starting point.

Deardorff does not offer direct, concrete definitions of the three core elements that she discusses; however, other cultural experts who have commented on Deardorff’s work have summarized the terms that she uses. Attitudes encompass valuing and being open to other cultures (Paige & Goode, 2009), having a positive outlook towards different cultures, being motivated to understand other cultures, and resisting ethnocentric behavior (Teekens, 2003). Knowledge and comprehension is described as having cultural self-awareness; developing culture-specific information, such as familiarity with the ways in which one’s gender role is viewed in other cultures; and developing linguistic knowledge (Paige & Goode, 2009). Skills entail enhancing the aptitude for engaging in critical self-reflection and reflexivity and communicating across cultures (Spitzberg & Changnon, 2009). One’s level of intercultural competence depends upon moving through these three core elements effectively.

When the core elements of attitudes, knowledge and comprehension, and skills act together, they produce two desired outcomes: (1) a shift in one’s frame of reference, in which “adaptability and flexibility play a central role” (internal), and (2) a shift in effective behavior in “intercultural situations and communication” (external) (Deardorff, 2009, p. 338). The process of gaining intercultural competence evolves over time. In order for this evolution to take place, there must be willingness, a conscious attempt, and a desire to achieve intercultural competence even though this process can be complex and overwhelming (Trimble, Pederson, & Rodela, 2009). The advantage of adopting this process model is that it can be used as a framework for best practices in order to cultivate intercultural proficiency as well as to provide a starting

point at which to mentor and train international teaching professionals (Deardorff, 2009).

Attitudes

The first core element in the process of acquiring intercultural competence is attitudes. When faculty members are preparing to teach cross-culturally, it is critical for them to learn to respect and value other cultures (Deardorff, 2009). It is also important to examine their intrinsic motivation for teaching internationally, openness to other cultures, and ethnocentric assumptions.

Valuing Other Cultures

This may be onerous as transnational faculty members face the challenge of adjusting to the branch institution in the foreign country without the usual support of co-workers, family, or friends (Bodycott & Walker, 2000; Debowski, 2003). Also, inadequate cultural preparation prior to the faculty member's departure may lead to a lack of cultural confidence that can spiral into negative viewpoints that devalue other cultures (Hollins & Guzman, 2005; Walters, Garri, & Walters, 2009). The success of intercultural competence rests upon the transnational faculty member's ability to view other cultures in a positive way (Hiller & Wozniak, 2009). Leask (2004) points out that faculty from Adelaide, Australia, who were sent to teach at a branch campus in Hong Kong stressed the importance of negotiating one's attitudes and appreciating the ideas and opinions of those from the foreign culture. Even though developing intercultural understanding must begin with the teacher's attitude (Crabtree & Sapp, 2004), the university sending the faculty members abroad must recognize the value of providing them with the opportunity to enhance their knowledge of the culture in which they are being sent to teach. Otherwise, feelings of anxiety, frustration, confusion, and disorientation may develop.

Motivation

Apart from valuing other cultures, examining what intrinsically motivates transnational faculty to teach cross-culturally and to learn about other cultures is a key factor in developing intercultural proficiency. Being enthusiastic and curious about other cultures increases faculty members' global savvy, "enhances their ability to understand people," and augments "their capacity for dealing with uncertainty and managing tension" (Gregerson, Morisson, & Black, 1998, as cited in Bennett, 2009, p. 128). Opal (2001) defines "curiosity" as being open and having a sense of wonder beyond the limits of what is accepted understanding,

even if it causes a feeling of being overwhelmed. This internal drive to suspend assumptions and judgments allows people to be open to multiple perspectives (Bennett, 2009). Furthermore, motivation can shift internal frames and strengthen intercultural adaptability and its outcomes (Spitzberg & Changnon, 2009). For instance, if a transnational faculty member naturally enjoys being in new cultural contexts, his or her innate enthusiasm will affect cross-cultural teaching in a positive way. In other words, one's motivation to teach in a cross-cultural setting will greatly influence the type of experience one will have, a topic that should be explored in pre-departure training.

Openness to Other Cultures

Another aspect of the attitudes needed for intercultural competence is the ability to be receptive to other cultures. Dunn and Wallace (2006) point out that, when transnational faculty members teach in a cross-cultural environment, they must be open to other cultures by suspending their judgments. Critical discussions regarding beliefs and cross-cultural teaching should take place during professional development seminars, where seasoned transnational faculty members share their experiences with new transnational faculty members. These seminars could address the importance of navigating ambiguity and the unease of being in cross-cultural situations in order for faculty members to better cope with being in a foreign context (Hiller & Wozniak, 2009).

Ethnocentricity

Understanding one's ethnocentric assumptions is another important facet in developing the attitudes necessary for intercultural competency. Ellis (2006) explains that *ethnocentricity*, a belief that one's culture is superior to others, narrows perceptions, inhibits learning and communication, and leads to misunderstandings. It also causes conscious and subconscious alienation when communicating with others from different cultural backgrounds. Leask (2004) argues that transnational teaching is an opportunity for faculty going abroad to overcome ethnocentrism by learning about other cultures rather than expecting students in the foreign country to be more like the dominant culture (Ellis, 2006). Therefore, transnational faculty members must be cognizant of tendencies to construct differences according to their values, beliefs, and perceptions, as this creates a binary of "us" and "them." This "othering" causes those of different cultures to feel less valued as human beings, reinforces dominant views, creates stereotypes, and promotes discrimination (Kim & Hubbard, 2007). Thus, cross-cultural teaching in an international branch

campus should be seen as an opportunity to learn about oneself and other cultural perspectives. Therefore, the department sending transnational faculty members to branch campuses should provide pre-departure training that both encompasses ways for them to examine and challenge their ethnocentric assumptions and promotes other cultural viewpoints (Storti, 2009). Paige and Goode (2009) explain that those who receive intercultural competency training have more expertise and confidence when dealing with cultural issues, as opposed to those who do not.

Knowledge and Comprehension

Knowledge and comprehension is the second core element in the dynamic process of developing intercultural competence. When a faculty member is preparing to teach in international branch campuses, it is important to examine his or her cultural self-awareness; develop culture-specific knowledge, such as how gender roles are perceived in other cultures; and understand both the local language and the function of language within cultures.

Cultural Self-Awareness

Teaching cross-culturally in an international branch campus is an opportunity for transnational faculty members to examine their cultural self-awareness, which is described as an understanding of “how the culture(s) we are raised in contribute to our individual identities, our preferred patterns of behavior, our values, and our ways of thinking” (Paige & Goode, 2009, p. 336). Cultural self-awareness is the basis for intercultural competency because it allows us to understand ourselves as cultural beings and makes it easier to recognize other cultural practices, respect other cultures, and manage cultural challenges (Bennett, 2009; Paige & Goode, 2009). Greenholz (2000) believes that it is a prerequisite for advancing through the stages of intercultural competence. The ability to comprehend one’s cultural norms and expectations, as well as recognition of cultural differences, provide a strong foundation for cross-cultural teaching. However, many institutions that send their faculty members to teach in branch campuses do not support opportunities for the development of this type of knowledge (Dunn & Wallace, 2006). This gap may be due to the lack of time, resources, priority, or competing interests. Nonetheless, it is essential for transnational faculty members to receive some form of preparation, whether it is cultural mentoring or case study activities that allow faculty members to explore their culture, individual identity, and ways of thinking.

Gender Roles

Being aware of how gender roles are viewed in various cross-cultural settings is an important aspect of developing the knowledge and comprehension necessary for intercultural competency. Teekens (2003) explains that gender roles are culture-specific and implicitly learned. For instance, some students may find it difficult to adjust to having a male faculty member teach a course as this may not be what they are accustomed to in their home country (Merriam, 2007). Also, teacher-centered societies such as India and Japan hold strong gender stereotypes that are deeply embedded in their cultures (Merriam, 2007). Crabtree and Sapp (2004) provide their own example of how Robin Crabtree’s gender and race were viewed differently in Brazil in comparison with her experiences of teaching in American classrooms. For instance, Crabtree was taken aback when a male student approached her, “placed his hand on her shoulder and gazed directly at her while he asked a question about one of the course assignments” (p. 118). Her uncomfortable reaction to this situation forced her to examine her own assumptions about gender roles and to recognize that she and the student held different attitudes towards gender role boundaries. By engaging in professional development opportunities, intercultural competency seminars, or workshops, transnational faculty members will have the opportunity to consider these difficulties in advance by examining their gender roles. It will also enable them to gain the skills needed to avoid obstacles in communication and social interaction, as well as mismatched expectations between themselves and students in the foreign country (Hiller & Wozniak, 2009).

Language

Apart from the need for transnational faculty members to examine culture-specific information, such as gender roles, the use of language is another fundamental aspect of acquiring intercultural proficiency. Language is one of the key means by which cultural knowledge is shared and revealed. According to Whorf (1952) as cited in Smith, Paige, and Steglitz (2003), the use of language is not only a means of conveying ideas, but it also shapes one’s ideas and mental thought processes. In other words, what we think and perceive about the world, particularly cross-cultural experiences, is how we talk about it with others. Language conveys so much more than what is uttered and how it is used because it carries assumptions about the culture itself (Teekens, 2003). For example, the use of “direct or indirect communication,” “implicit cues of social communication,” or the “explicit use of

communication” all frame the interplay between language and culture (Smith, Paige, & Steglitz, 2003, p. 105). Moreover, the use of language functions in tandem with non-verbal behavior, such as body gestures, touch, eye contact, and interpersonal distance to others, which are all significant to intercultural competence. Learning to make adjustments to the appropriateness and effective use of language in a cross-cultural context is a fundamental aspect of preparing faculty members to teach in international branch campuses.

Preparing faculty to teach cross-culturally also requires that they learn the language of the foreign culture or improve their language skills, depending on the duration of the transnational teaching contract. However, McBurnie and Ziguras (2007) and Lewin (2008) indicate that, in addition to receiving inadequate training to instruct diverse learners, faculty members are often oblivious to the native language used in the foreign branch. Paige and Goode (2009) state that those who are unable to speak the language required to function in a foreign country will find intercultural experiences to be more stressful and will feel more isolated. Thus, faculty members who know the language of the target country will feel more comfortable with cross-cultural teaching experiences (Dixon, Borman, & Cotner, 2009).

Skills

Skills are the third core element in the process of developing intercultural competence. They involve self-reflection, reflexivity, and the development of one’s communication abilities. Though these skills are not specific to intercultural competence, they are crucial to processing knowledge about one’s own culture as well as other cultures (Deardorff, 2009).

Self-Reflection

A core element of skills development for intercultural competency is self-reflection. Smith (2010) describes self-reflection as “noticing, making sense, making meaning, and working with meaning” in order to transform learning experiences (p. 114). Mezirow (1998) describes three levels of reflection that facilitate cultural transformation: (1) content reflection, (2) process reflection, and (3) premise reflection. Content reflection refers to what we perceive as the problem surrounding roles and relationships. For instance, what is the role of the faculty member in the classroom: Is it the seer on stage or mentor? Process reflection involves an analysis of the way in which one’s perception of the situation shapes one’s actions and one’s evaluation of the given context (Mezirow, 1998). In other words, how well does a faculty member

negotiate his or her cross-cultural adjustment (Smith, 2010)? Lastly, premise reflection pertains to being aware of why we perceive the things we do, a process that leads to perspective transformation (Mezirow, 1998). For example, Crabtree and Sapp (2004) discuss the ways in which Crabtree negotiated the three levels of reflection in a positive way while she taught in Brazil, since she was willing to adjust her ways of thinking. When Crabtree began teaching in a Master’s program organized by a U.S. university in Brazil, she was confounded by the regular interruption of her class for coffee breaks, which are a daily occurrence in Brazilian culture and “are determined by the cultural norms” of the country (p. 117). This stage represents content reflection, and Crabtree moved past this step and entered the stage of process reflection by recognizing her North American cultural context and realizing that “Brazilians and North Americans place different values on various moments in the educational process and daily schedule. . . .” (p. 117). After coming to this realization, Crabtree was able to undergo Mezirow’s process of perspective transformation by “developing a more flexible and negotiated learning environment” (1998, p. 120) that took into consideration the students’ expectations based on Brazilian cultural norms, as well. By reflecting on the ways in which Crabtree’s cultural beliefs and values affected her perceptions of teacher-student interaction, she realized that it was easier for her to learn to adapt to the local culture, which resulted in a positive cross-cultural learning experience.

Reflexivity

Littlejohn and Domenici (2007) explain that reflexivity denotes having a critical perspective of one’s interaction with others. When we are being reflexive,

- (1) we are aware of the ways in which our interpretations and actions are influenced by others,
- (2) we become conscious of the rules that guide our context, and
- (3) we are able to explore other contexts and rules for interpreting an action in a situation. (p. 146)

In other words, being reflexive means that we are engaged in a process of meta-cognitive construction, thus gaining the tools needed for intercultural competency. For example, Fransman (2003), as cited in Crabtree & Sapp (2004), indicates that reflexivity is required for teachers to transcend existing cultural divides and avoid cultural biases. Reflexivity opens up opportunities to explore different ideologies of other cultures, because merely being in a cross-cultural teaching environment does not enhance intercultural competency. However, the ability to constantly reflect

on the significance of the experience will move faculty members towards a more positive intercultural experience (Greenholz, 2000). If faculty members are not provided with professional development opportunities to learn about or practice reflexivity, there is a greater likelihood that they will experience difficulties understanding different cultural rules and situations, which may lead to a negative teaching experience at the branch campus. Teekens (2003) also stresses that more effort should be made to prepare faculty members to practice reflexivity as part of pre-departure training.

Communication Skills

Having the ability to negotiate different cultures requires effective communication skills, which are a key component of developing intercultural competence. Hannigan (1990) indicates that communication skills include the ability to enter into a meaningful dialogue and successful management of miscommunications. Learning these basic skills is not only beneficial to cross-cultural teaching in a branch campus environment, but it is also an important attribute to have in our diverse global society. An advantage of effectively dialoguing across cultures is that it bridges differences and creates a collective meaning, which could be beneficial when discussing challenging topics in a transnational classroom (Littlejohn & Domenici, 2007). Communication through dialogue has the potential to foster problem-solving and critical thinking skills, to expand one's knowledge base (Ellis, 2006, Wang, 2008), and allow deeper assumptions and meanings to be explored (Simpson, Large, & O'Brien, 2004).

Hannigan (1990) also argues that a key ingredient of communication through dialogue is possessing active listening skills. Littlejohn and Domenici (2007) point out that active listening requires suspending judgment; attending to what is being said, and how it is expressed; and asking clarifying questions. All of these steps exemplify meaningful communication. In developing intercultural competence, it is crucial that faculty members have an opportunity to practice these skills during pre-departure workshops or training sessions (Storti, 2009) through role-playing, case studies, invitational dialogue, and other exercises.

Conclusion

This paper uses Deardorff's process model of intercultural competence as a framework for the preparation of faculty members to teach cross-culturally in international branch campuses. As universities internationalize their degrees and programs through branch campus arrangements, faculty members who are

tasked with teaching transnationally have an increased responsibility to develop the competencies needed to work with people from different cultural backgrounds (Otten, 2003). Transnational faculty members must examine their attitudes toward other cultures, including appreciating other cultural viewpoints as well as understanding their motivation to teach in a foreign context. Developing this competence also means embracing other cultures and challenging one's ethnocentric beliefs. In addition, faculty members teaching abroad must build their knowledge and comprehension of different cultures by practicing self-awareness, examining how their gender roles are viewed in certain cultural environments, and determining how language (verbal and non-verbal) is used to convey ideas and thoughts. Furthermore, developing self-reflexive skills will enable transnational faculty members to think critically about their experiences and interaction with cultural others. Most importantly, acquiring effective communication skills through meaningful dialogue and active listening will provide these faculty members with the key elements of meaningful cross-cultural communication.

It is clear that transnational faculty members must develop the necessary intercultural competencies to successfully teach in cross-cultural environments. It is equally important for transnational faculty members to respond to learners from diverse backgrounds in a way that is positive, appropriate, and respectful to their culture (Hofstede, 1986). Therefore, through pre-departure and ongoing training, faculty members must transform their attitudes, knowledge, and skills in order to facilitate positive interactions with learners from other cultural backgrounds (Otten, 2003; Storti, 2009). Gaining the culture-specific knowledge and principles required to function in other contexts can be fostered through case studies, role-play, discussion groups or individual reflection activities, and other exercises to develop the core elements of intercultural competence (Spitzberg & Changnon, 2009). However, transnational faculty members undergoing this type of training must understand that developing such competencies is an ongoing process that involves the deconstructing and reconstructing of one's fundamental values, beliefs, and perceptions.

In order to pinpoint the type of training that will be most useful for faculty members teaching in cross-cultural environments, it is advantageous to assess and measure their level of intercultural knowledge and sensitivity in order to tailor professional development programs to their needs. For instance, faculty members can evaluate their level of intercultural sensitivity and worldviews by completing the Intercultural Development Inventory (IDI), based on Hammer and Bennett's developmental model of intercultural sensitivity (Cushner & Mahon, 2009). Results of the inventory can be used to customize professional development programs.

While professional development and pre-departure and ongoing training opportunities are needed to support transnational faculty in branch campus environments, policy structures must also be in place to support these endeavors. There must be a commitment by the institution at various administrative levels for these types of programs to move forward (Otten, 2003). One of the greatest challenges to cross-cultural teaching and learning is that it must compete with traditional policy interests and key decision-making bodies whose focus tends to be revenue generation (Paige & Goode, 2009). If policy-making bodies are not interested in supporting transnational faculty, then they will override and negate intercultural competency training initiatives. Thus, the institution in the home country must be willing to invest in intercultural competency training (Moodian, 2009).

Universities who have transnational teacher training initiatives in place should also conduct assessments in order to enhance their programs. Palomba and Banta (1999) define assessment as the “systematic collection, review, and use of information about educational programs undertaken for the purpose of improving . . . learning and development” (p. 4). Assessment is seen as a key force for “both monitoring and improving standards” in transnational learning environments and plays a vital role in the legitimization of educational experiences (Torrance, 1997, p. 320). Therefore, focusing on elements of intercultural competence, such as the faculty member’s ability to listen, take multiple perspectives, and communicate cross-culturally, is an important aspect of gauging cross-cultural experiences. Assessing transnational teacher training can help identify those transnational members who want to be involved in temporary cross-cultural teaching opportunities, as opposed to those who would like it to be a lifestyle choice and then develop a model suitable to their needs.

Developing intercultural competence is a very complicated and stressful process, as one has to manage situations in which a great deal of information is unknown (Wiseman & Koester, 1993). Furthermore, interacting with people from different cultures can create feelings of uncertainty and anxiety. Uncertainty refers to one’s inability to predict or explain other people’s behavior (the fear of the unknown) (Wiseman & Koester, 1993), whereas anxiety is described as the fear or anticipation of negative consequences. It is natural to experience ambiguity, uncertainty, and anxiety when teaching in a foreign environment, but these situations can be viewed as opportunities for personal growth and learning about oneself and others. Therefore, it is essential for faculty members to foster resiliency and the ability to adjust to ambiguous situations with minimal discomfort, as this capability will be an important asset for transnational teaching.

Overall, Deardorff’s (2006) process model of intercultural competence is a valuable guide and a practical framework in which to develop the competencies needed to teach in cross-cultural environments. However, her model must extend beyond merely acquiring the attitudes, knowledge and comprehension, and skills; it also needs to take into account the ability to adapt to other cultures, navigate one’s emotions, learn intercultural sensitivity, and manage conflict, as these are also rudimentary aspects of developing cross-cultural competency. Furthermore, as Deardorff’s model suggests, gaining intercultural competence is a non-static and complex process. Thus, it is best to combine her model with other cultural models (i.e., compositional, co-orientational, adaptational models, etc.) in order to create a hybrid model suited to helping transnational teachers in the current trend of globalization.

Developing intercultural competence is essential for cross-cultural teaching initiatives and, in general, for navigating the continuum of globalization. Spitzberg and Changnon (2009) project that “cultural diversity will manifest in the global market place making intercultural competency an extremely important skill” (p. 337). Cultural diversity has already permeated academia at a local level as many North American universities have implemented diversity plans to increase cross-cultural engagement between faculty members and students. As people become more globally mobile, the ability to respect and value other cultures is not only imperative to educational systems around the world but to producing globally-minded citizens, preparing them to work in international contexts and creating a more democratic society.

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Changing General Education Perceptions through *Perspectives* and the Interdisciplinary First-Year Seminar

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Introducing the general education curriculum in a required first-year seminar can be challenging. However, it provides a great opportunity to influence students' perceptions. The results of this study indicate that doing so increases student appreciation for general education and increases student confidence in general education course selection. This should enhance the classroom learning environment for all as students approach general education classes with greater interest and understanding.

General education is rooted in educators' belief that its courses should teach students knowledge for life (Bastedo, 2002). More specifically, it should develop skills that foster students' achievement in their academic pursuits and beyond (Glynn, Aultman, & Owens, 2005). In a broader sense it can offer a variety of learning experiences to educate students on how to be responsible, caring members of society (Benander, Denton, Page, & Skinner, 2000). As a result of their general education, students should be better able to view diverse cultures, lifestyles, and backgrounds from objective and informed perspectives (Glynn et al., 2005). It is no surprise then that colleges and universities persist in general education curriculum inclusion as a way to fulfill their institutional missions.

General education, in a broad sense, is comprised of a grouping of courses in the liberal arts. They represent various disciplines in the arts and humanities, social sciences, natural sciences, quantitative reasoning, and sometimes foreign language. At some institutions this grouping is a set of prescribed courses more focused on skills development. At others it is a selection of elective courses from each area designed to broaden perspectives (Warner & Koeppe, 2009). A combination of required and elective courses is also common. The number of credit hours in the general education core varies with anywhere from 20 to 60 credit hours of the typical 120 credit hours needed to earn a bachelor's degree. Although some general education courses are offered as third- and fourth-year courses, most are designated as first- or second-year courses (Lemann, 2004). The goal is to provide a greater appreciation and understanding of human civilization beyond the discipline-specific depth found in a particular field of study.

However, students often view courses that fulfill a general education requirement as unnecessary or not related to their interests or major (Gump, 2007). They do not see the relevance of such courses and sometimes contribute minimal effort to understanding the material and making connections to other fields of study,

including their own academic major. This can be manifested in the general education classroom with superficial dialogue, distracting behaviors, and even poor attendance. In response, those involved in developing the general education curriculum want to offer courses that motivate students and engage them in learning (Weissman & Boning, 2003). This is a sound approach given that students tend to do better in courses that they find more interesting (Keller, 2002).

Introducing students to the general education curriculum and the courses available to fulfill the general education requirements early on can influence student motivation by equipping them with knowledge and access to faculty. The first-year seminar provides a great opportunity to set the tone for academic expectations as students can develop a sense of ownership over their scholarly pursuits from active learning exercises in this course (Ishler, 2003). This is particularly true for in-class experiences that relate to choices, such as academic major or course selection, which they will have to make in their collegiate career.

A first-year seminar is typically an extended orientation program, study skills class, a full length academic course, or some combination of these (Griffin & Romm, 2008). Although the content, format, and delivery often vary, first-year seminars are common among community colleges, liberal arts colleges, and research universities across America. For those institutions that offer the first-year seminar as a course, it may be required, offered as an elective, graded or not, and it may range from one to three credit hours or not carry any academic credit. Variation is common as each program reflects a unique institutional focus such as student retention, engagement, intellectual development, or career exploration to name a few (Tobolowsky, 2008).

Of the colleges and universities who participated in a national survey, 85% reported offering some form of first-year seminar (Tobolowsky, 2006). Ultimately, the goal of most first-year seminars is related to student retention although many set out to increase social and academic integration (Tinto, 1993). Social connections

can come from campus events as well as student activities and organizations. Academic connectedness is fostered by course instructors and the course content. Of the institutions offering a first-year seminar, the majority (64.2%) cite academic skills development as a top objective (Tobolowsky, 2006).

Part of fostering academic skills is disseminating, analyzing, and integrating information. As a result many first-year seminars draw on material from the liberal arts. In fact approximately half (50.4%) of institutions that offer a first-year seminar for academic credit allow the seminar to apply toward general education requirements (Tobolowsky, 2006). Yet the extents to which general education requirements are introduced in the first-year seminar and to which seminar students perceive, understand, and appreciate general education courses are limited.

This study was designed to investigate whether student appreciation for general education could be increased by implementing a new component to a required first-year seminar. This new component involved faculty members from all disciplines in the required liberal arts general education core. The innovation here came from the coordinated efforts of faculty members across disciplines, academic support staff, course scheduling, and utilization of campus facilities. The initiative was supported by faculty members and endorsed by the university administration. It was also hoped that this institutional initiative would result in an increase in student confidence in general education course selection. This would allow students to pursue courses of interest and enhance the classroom learning environment as more students enroll in general education courses by choice and not by default.

First-Year Seminar and the *Perspectives* Sessions

This research took place at a public liberal arts college in the northeast with an enrollment of approximately 1,400 students. First-Year Seminar was only required for new students who had less than 18 earned college credits, thus most transfer students were not required to participate. The year of survey administration was the first year the university required new students to take the 3-credit hour First-Year Seminar. In the past it was offered in a modified format as an elective.

The First-Year Seminar goals included (1) building a freshman class community and identity, (2) introducing students to the academic and social life of the campus, and (3) fostering an appreciation for the liberal arts general education curriculum. It was hoped that student satisfaction with First-Year Seminar would also translate into more positive experiences in general education courses.

Each of the 17 sections of the course had its own topic of study related to a particular major offered by the institution. For example, two sections entitled *Venture Out* were offered for business-related majors, a section of *The Beatles* was offered for prospective communications students, and a section called *A Sense of Place* was scheduled for potential environmental science majors. Students were assigned to sections based on their intended majors. Students in the same major were also assigned to the same first-year composition section, math course, and one course from the general education core. This type of block scheduling forms a learning community in which students connect with a smaller group with similar interests.

Undecided students were assigned to an inclusive section (e.g., *Career Exploration*), and additional sections were reserved for nontraditional students. The nontraditional student sections met in the evening as most were unavailable during the day due to job or family responsibilities. This helped those in a life stage rather separate from typical first-year students to connect with each other. Course requirements common to all sections included attending various campus events and visiting several campus resource offices via course instructor referrals.

A major common component was the weekly *Perspectives* sessions in which additional faculty members introduced students to various disciplines in the liberal arts general education curriculum. Several individual sections of First-Year Seminar that met at the same time came together in a lecture hall for class. This is not so different from frequent multiple section gatherings in other learning community contexts such as undergraduate research (Kaul & Pratt, 2010) or multicultural studies (Jehangir, 2009). In this way the liberal arts faculty only had to lead three sessions, not one for each individual section of the course. In these sessions faculty challenged students to consider issues in contemporary society from various *Perspectives*. Instructors were specifically asked to prepare active learning class exercises rather than taking a passive learning lecture-style approach.

The idea was that each liberal arts discipline offered a meaningful and diverse *Perspective* on contemporary society. Points of view are expressed in varying overt and sometimes necessarily subtle ways. Taking the multiple perspectives as a whole provides a more critical, informed, and balanced knowledge set to make sense of contemporary society and one's role in it. This includes how an individual influences society and is influenced by it.

For example, one week a theater professor, a music professor, and an arts professor led the *Perspectives* session on the creative, fine, and performing arts. This session included listening to several classical musical

works to highlight how various elements such as anger, sorrow, or humor were expressed by the music in the absence of lyrics. This served as a commentary of the time and place during which the composer lived. During another week, professors from English and creative writing addressed literature and language. This included developing progressive poems in groups (each student adding words) and analyzing the resultant works. Students were also asked to offer reflections on the lyrics from a contemporary song regarding the artist's view of contemporary society.

Other *Perspectives* sessions included natural science faculty members discussing brain chemistry and function, an anthropology professor using the NACERIMA article by Horace Miner (1956) as a class exercise, and psychology and sociology faculty members discussing college students and deviant behavior. These sessions gave first-year students a chance to meet faculty members who were not First-Year Seminar instructors but whom they would meet in other courses in general education later in their college experience. Students were required to submit weekly reflection papers based on their experience with that week's *Perspectives* session. The reflection papers accounted for 30% of the grade in First-Year Seminar.

Curriculum Change and Institutional Legacy

Faculty discussions regarding changes in general education or institution-wide course requirements are complicated at best. The process can be hampered by conflicting disciplinary interests such as protecting student enrollment in particular courses or unwillingness to consider a different pedagogical approach. Either concern is well founded as they may necessitate major revisions for particular faculty members. However, change is not impossible. As outlined in the discussion section of this paper, the process can be proactive and collegial if the conversations are focused on student benefits and if incentives for the faculty as a whole are clearly articulated. This is enhanced when administrative support is evident and faculty members are presented with compelling evidence which suggests that making change will be beneficial for students, faculty, and the institution overall. This was the case in proposing to make First-Year Seminar with the *Perspectives* component a required course in the general education curriculum.

Method

A mixed methods approach was utilized by performing a quantitative analysis of student survey responses and a qualitative analysis of content in student writing. A survey was administered during the

last week of class to 29 sections of various courses at the second through fourth-year level as well as all 17 sections of First-Year Seminar. The survey included multiple choice questions focused on demographic and behavioral variables as well as a question inquiring about whether or not they completed First-Year Seminar. Follow up questions utilized a Likert-scale to inquire about their level of agreement with various statements regarding First-Year Seminar (for those who completed the course). Data was entered into SPSS and then analyzed using ANOVA at the .05 alpha level. Randomly selected student reflection papers were also analyzed to determine themes and assess experiences related to the weekly *Perspectives* sessions.

Results

The survey was administered to 617 students with 445 completed responses. The actual response rate was likely somewhat higher than the calculated 72.1% as some students were enrolled in more than one course where the survey was administered thus they were not asked to complete it multiple times. Gender and classification was rather balanced with 52.1% female respondents as well as 46.1% first-year students. Second-year and above students were represented by 14.2% second-year, 16.4% third-year, and 23.4% fourth-year. Second-year and above students (none of which were transfers to the institution) were asked to reflect on their first semester of attendance experience when completing the survey.

Table 1 displays the survey results regarding student perspectives on the general education curriculum using level of agreement on a 5-point Likert scale (5 = strongly agree, 1 = strongly disagree) at the end of their first semester of attendance. Students who completed the required First-Year Seminar with the *Perspectives* sessions were well versed with the general education requirements, appreciated the course's value to a greater degree, and seemed more comfortable in making general education course selections.

Several themes were apparent in the student reflection papers. Students expressed that they had a greater awareness regarding the course content of various general education subjects as a result of attending the *Perspectives* sessions. The following student quote was representative of this theme: "It showed me what I am capable of doing and it made me think of making my minor English or Writing."

Students expressed how the *Perspectives* sessions helped them to consider other views and how various disciplines in general education are not only related to each other but also to their particular major. The following two student quotes is reflective of this theme:

- "The creative process is an integral part of cognition in general. If we cannot see one line of a poem or one line in a story and interpret it

Table 1
General Education Curriculum Student Perspectives

Survey Item	First-Year (<i>n</i> = 205)	Second-Year + (<i>n</i> = 240)	Difference
I have a good level of understanding of the general education curriculum.	3.85	3.41	+0.44*
I see the importance of the general education curriculum.	3.71	3.05	+0.66*
I am confident about selecting courses in the general education curriculum that are of interest to me.	3.83	3.25	+0.58*

Note. Mean level of agreement (5 = strongly agree, 1 = strongly disagree)

* Significant at $p < .001$

in different ways, how can we address a problem in the business world when one of our methods has already been exhausted? Critical thinking, open minds, and varying perception of situations will make us very versatile candidates for future jobs and endeavors.”

- “Although I am a Psychology major, I think that the information given will be valuable to me in the future. For some of my elective courses, I may decide to take a writing or poetry class. I find it important to take as many different courses as possible so I can gain more knowledge in different fields of study. These sessions are helpful in doing so.”

Students also expressed a greater confidence and enthusiasm about which courses they might take to fulfill the general education requirements. This theme is represented by the following student quotes:

- “I’m definitely thinking about taking some different courses now as a result of these sessions.”
- “This kind of knowledge would have never been available to me if it was not for the perspectives sessions. Without this information I would not have an idea of what I would be getting myself into when registering for courses.”

Discussion

One goal of the newly required First-Year Seminar with the *Perspectives* sessions was to foster an appreciation for the liberal arts general education curriculum. Survey results and student written reflections indicate that the seminar was successful in

reaching that goal. The *Perspectives* sessions not only raised awareness but also increased student appreciation for the liberal arts general education curriculum. This appreciation was manifested not only in knowing what particular general education courses are about, but also in knowing how they relate to contemporary society. For example, students connected how works of literature resonated with social elites who had the power to inspire a transformation movement much the same way that the Internet is now used as a medium to foster change among the technologically advantaged.

Students also connected how taking courses that they were more interested in (out of the choices provided) would enhance their learning experience. This reduced anxiety or confusion about course selection and thus increased their motivation and enthusiasm. They saw general education courses as opportunities to learn rather than requirements to endure. Further research will help determine whether this change in attitude carries over to the classroom setting to enhance the learning environment for all students as well as the instructor. Continued analysis may also help determine if this change in student knowledge about course selection better prepares students regarding expectations and thus should reduce student attrition as a result.

Perhaps course selection familiarity could easily be imparted during a one-time session using a handout clearly articulating the general education requirements. This may have some success; however, it lacks the benefit of students experiencing what a course in a particular discipline might be like firsthand. For example, in high school students may be exposed to geography or history via a class in social sciences, but appreciating the difference between archeology and cultural anthropology may not be so apparent. Thus, not only is course sequencing an important element

influencing student retention: it is a valuable part of the college or university experience (Barefoot, 2004).

Making a significant change in the general education curriculum is a daunting task. Sometimes faculty members perceive that they are not empowered in the process but at the same time administrative support is often needed to implement the modifications (Lindman & Tahamont, 2006). It may be possible to make change if well planned and communicated to the university faculty. It is helpful to start small with a targeted objective that is tied to a larger goal for the curriculum (Kanter, 2000). The goals in this case were clearly defined and communicated to faculty members at the outset. The inclusion of the *Perspectives* sessions was designed to enhance the general education experience which hopefully could translate to a better learning environment in the classroom which was positive for all instructors. Empowering students with information also relieved faculty advisors somewhat with regard to having a commanding knowledge of the general education curriculum and the nuances associated with each course.

Getting faculty to participate by leading the *Perspectives* sessions was not as difficult as some concerned administrators assumed. Faculty quickly realized that the benefit of having access to the entire first-year class to expound on their particular discipline (namely, potential increase in their course enrollments with students who were interested in being there) outweighed the cost of their preparation and delivery time. They ended up appreciating the enjoyable diversion from their regular teaching duties during a particular week as an opportunity to positively contribute to the general education curriculum.

Getting the university faculty to adopt the First-Year Seminar as a required course in the general education curriculum was also not as challenging as first thought. The course with the *Perspectives* sessions ran as a pilot for one year. First- to second-year retention for students who were enrolled in First-Year Seminar was 84.6% compared to only 67.9% for those who did not take the course. This convinced the academic administration that the new format was worth implementing campus-wide. The faculty voted in favor of adopting the course as a requirement in the general education core at the same time that they eliminated the longstanding Senior Colloquium, which was source of discontentment with faculty and students alike. Circumstance certainly played a role in swaying faculty members; however, so many of the instructors had been involved in the pilot in some way, either as a course instructor or as a *Perspectives* session leader, that they were able to speak of the benefits to their colleagues not associated with the course.

Limitations and Recommendations for Future Research

The results of this study are significant, but some caution should be exercised before making application to other contexts, as is the case with most primary research. The sample population was limited to one institutional setting. Administration – faculty cooperation can vary depending on campus size, teaching expectations, and campus collegiality. Also, there is a great variety of components included in first-year seminars across the country, whereas only the initiative utilized by the host institution was considered in this study.

Future studies could focus on faculty perspectives to see if the approach used in the first-year seminar in this study influenced the motivation of students in general education courses over time. It would be interesting to see if enrollment in particular general education courses increased as a result of introducing the general education curriculum in the first semester. A final line of inquiry could be longitudinal in nature and include students' perceptions measured over time to determine if they in fact do select general education courses that are of interest to them or if they use some other criteria such as time of day the course is offered, classroom location, or reputation of the instructor.

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Internationalization of the Higher Education Classroom: Strategies to Facilitate Intercultural Learning and Academic Success

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The number of students studying abroad is continuing to grow, which allows for intercultural learning to take place while forming cross-cultural relationships. This intercultural understanding plays a vital role as businesses begin operating in the global marketplace where cross-cultural relationships and understanding are needed. International students bring differing cultural experiences, expectations, and learning styles to the higher education classroom that allow for new perspectives to be introduced. How can faculty effectively leverage this cultural diversity in the classroom while addressing the academic needs of both the host and international students? Through effective teaching practices in a globalized classroom and an awareness of the cultural diversity present in the classroom, faculty members can provide learning opportunities, both academic and socially, that meets the needs of host and international students while preparing them for effective interactions in a globalized society.

Introduction

The vast geographic distances between countries and cultures have been diminished through the use of technology, which has opened new relationships and interactions globally. In order to develop new cross-border relationships and sustain these relationships, a better understanding of cultural differences and similarities needs to occur. Institutions of higher education have played – and will continue to play – a vital role in cultural understanding and the formation of cross-border relationships through internationalization of the classroom and university.

Enrollment of international students continues to rise at universities across the United States and the globe (Lee, 2008). While this increase in enrollment appears on the surface to be sufficient for higher education to facilitate globalization, it is not. With an increase in cultural diversity in the classroom, new challenges exist that faculty must be aware of in order to meet the needs of both host and international students. Challenges exist with language barriers, differing learning styles, preconceived cultural traits, and the development of methods to effectively assess all students in a culturally diverse classroom. How does classroom pedagogy need to be adjusted in order to provide an academically rewarding experience for both international and host students while fostering intercultural understanding and relationships?

Through the use of varying teaching methods, faculty members can assist international students in becoming acclimated to their new cultural environment while also assisting host students in adapting to new cultures being introduced into the classroom. These practices will also allow for cross-cultural understanding to occur, which can lead to a better appreciation of cultural differences while identifying similarities that exist between cultures. Through this

understanding and appreciation, cross-cultural relationships can be formed, and students will become better prepared to be responsible citizens in a global society.

Understanding the International Learner

As international students begin their higher educational experience in a new culture and environment, this presents challenges that can have an impact not only on their overall experience, but also academically. In a random survey of 165 undergraduate international students, Kwon (2009) uncovered overwhelming feelings of fear and stress in the international students sampled. These fears and anxieties are further compounded by the fact that international students are facing unknown societal values, structures, and systems, both within the host country and also in the microcosm of the host university (Gu, Schweisfurth, & Day, 2009).

International students also indicated that they suffered from homesickness even though they regularly communicated with family and friends via email, text messages, and phone conversations (Gu et al., 2009; Kwon, 2009). This feeling of homesickness is further exacerbated by the tendency of host students not to interact with international students voluntarily or engage international students in their activities (Kwon, 2009; Summers & Volet, 2008). Although this survey of international students took place on a United States campus, other studies have shown that this lack of engagement of international students exists in other countries as well (Summers & Volet, 2008).

Beyond adjusting to a new culture, international students also need to adjust to new expectations and challenges associated with their academic work. Even if the international students were academically successful in their country, they can easily lose confidence in their

academic ability in the new environment (Kingston & Forland, 2008). This loss of confidence can stem from the introduction to new pedagogies that can be further accentuated by the reluctance of international students to ask for clarification or guidance when confronted with these new pedagogies (Gu et al., 2009). Another contributor to a loss of confidence can be the cultural differences that exist within the classroom. For example, in the Eastern philosophy of education, the teacher is the possessor of all knowledge and the student is in the classroom to absorb the knowledge being shared (Eaves, 2009). The classroom experience is also regimented since students are expected not to engage in dialogue unless invited to by the teacher. Otherwise, the student is viewed as challenging the intellectual authority of the teacher (Eaves, 2009). This contradicts the Western classroom experience in which students are encouraged to ask questions, engage in dialogue as part of the learning process, and challenge the teacher to garner further insight into the topic (Eaves, 2009). Faculty members in the internationalized higher education classroom should utilize host students as examples on how interaction should occur in the classroom, and they should provide positive feedback to the host students to set a tone of acceptability for students to dialogue and question in the classroom.

Creating an Inviting Classroom Environment

In order for any student to be successful, it is important to provide a classroom environment that is inviting and encourages students to be engaged in their own learning. This is even more vital when instructing students from another country who are already in an unfamiliar environment (De Vita, 2000). While faculty members should not stereotype students based upon their cultural background, a cultural awareness is important for professors when creating an inviting classroom environment. By being aware of the various cultures in the classroom, faculty can address cultural inequalities that exist in order to balance access to learning opportunities and equal engagement of all students in the classroom. By doing so, faculty members will avoid skewing the learning environment towards the host culture and students, effectively neglecting a portion of the classroom population (Eaves, 2009).

The classroom needs to be perceived as inviting and conducive to learning from the first time the student enters the classroom. In order to begin creating a non-threatening environment, faculty members should utilize a large portion of the first class session to allow students to get to know each other and allow for informal interactions between the students and faculty member (De Vita, 2000). The use of ice-breakers, such as those found at the Wilderdom, A Project in Natural

Living and Transformation website (2006) can allow for informal interactions to take place and allow students to get to know each other. Through ice-breakers, students can learn how each likes to be referred to, learn how to correctly pronounce names, and learn something unique about each other which may assist in forming bonds and relationships outside of the classroom (De Vita, 2000). These peer relationships have been shown to be beneficial to international students as a support mechanism while they also provide host students the opportunity to develop intercultural awareness (Jones, 2010).

Creating peer-pairing programs can also be beneficial by matching a host student with an international student. The host student can assist with familiarizing the international student with campus resources, assist in tutoring, and serve as a support for the international student (Summers & Volet, 2008). Satisfaction surveys have shown that both international and host students find peer-pairing an effective means to increase cultural awareness while providing a more positive overall experience (Summers & Volet, 2008).

The relationships that international students form with faculty and staff at the college are also vital to the success of the students. Students from other countries are at a disadvantage in their support structure since there is a great physical distance between them and their families (Montgomery, 2010). Because of this, students are looking for other forms of support, and faculty members can provide that to the international students. International students appreciate any opportunity they can have to interact with their professors: “. . . just a five minute conversation would mean a lot to us” (Jones, 2010, p. 173). Therefore, it is important that faculty members make themselves available outside of the normal class time in order to provide opportunities for students to interact with them during times when the class is not in session (De Vita, 2000).

Beyond the opportunity to interact with their professors, international students are seeking open-mindedness, flexibility, enthusiasm, passion, and inclusion in the learning process (Jones, 2010). Additionally, being approachable, caring, and understanding are all traits that international students seek from their professors at the host institution (Jones, 2010). Faculty members can demonstrate these characteristics through a variety of means, both in and out of the classroom. Allowing the student to address the professor, based upon their cultural norms, can signify that the faculty member is not only approachable, but open to learning about other cultures (De Vita, 2000). Encouraging questions, not dismissing any question as irrelevant, demonstrating active listening skills, and showing appreciation all create an inviting environment and demonstrate that professors

are there to assist students and that they care about all their students, both socially and academically (De Vita, 2000).

Language and the Internationalized Classroom

When students of varying language backgrounds convene in the international classroom, language barriers are inherent. Language not only impacts the ability to learn, but it can also lead to decreased confidence in students (Ramburuth & Tani, 2009). In a phenomenological study of international students at a large public research institution, international students identified language as a key factor in shaping their experiences (Halic, Greenberg, & Paulus, 2009). Even students who felt they were proficient in the English language stated that delivery of the English language in the classroom created challenges. For example, in the English language the tone was softer than their native language, leading to the perception that English lacks the affect and emotion of their native language, and accents created challenges to fully comprehending what was being discussed in the classroom (Halic et al., 2009).

Host students can also experience challenges regarding language (Jones, 2010). Host students tend to avoid interactions with international students out of fear that language barriers can lead to misinterpretation of innocent comments as being racially or ethnically insensitive (Montgomery, 2010). In addition to this fear of misunderstanding, host students are typically unwilling to expend additional energy to further explain their comments or unfamiliar terminology to foreign students who do not command a grasp of the English language (Jones, 2010). This creates a divide between host and international students.

While international students tend to view language differences as a barrier, they also see the benefit of learning the host country's language. As students go through the acculturation process, language plays a crucial role. As international students begin to more fully utilize the host country's language, develop the ability to interpret slang, and more fully comprehend interactions using the host language, they begin to utilize this as a channel into the new culture (Halic et al., 2009). In other words, they view language as a means to integrate themselves into their new culture and environment.

Strategies for Overcoming Language Challenges

Faculty should not simply dismiss these language challenges and expect international students to adjust. Rather, faculty members should utilize techniques in the classroom that mitigate the impact that the host language can have, and this will also increase

interactions among all students. In order to allow students that are non-native language speakers to better comprehend what is being discussed in the classroom, professors should slow their pace of delivery and avoid using slang and metaphors which may not be readily understood (De Vita, 2000; Gabb, 2006; Ramburuth & Tani, 2009). If faculty members do use metaphors or slang in the delivery of information, they should take time to explain what the metaphor or slang is since these are typically cultural-centric (De Vita, 2000). Additionally, as professors are preparing lectures and classroom discussion activities, they should empathize with the international students to identify any potential language challenges that may be created and also identify content-specific terms that may need to be defined (Ramburuth & Tani, 2009).

Faculty members should also limit their one-way communications in the classroom, in the form of lectures, to short time periods only (De Vita, 2000). As students are exposed to lengthier monologues, they can suffer from language fatigue in the process of interpreting what is being said, which further challenges them in their understanding of the topic (De Vita, 2000). Limiting lectures also allows for more learner-centered activities to take place in the classroom. As students engage in more active learning in the classroom, their reliance upon understanding the spoken word is decreased. These learner-centered activities increase the learning that takes place while also minimizing any language barriers that may exist (De Vita, 2000; Halic et al., 2009).

Non-verbal cues play a crucial role in the conveyance of information to students, regardless if they are native speakers or not (Teekens, 2003). Not only should faculty members pay attention to the non-verbal cues of their students, they should pay attention to their own non-verbal cues that they are exhibiting. In order to overcome some of the challenges associated with language comprehension, professors can use their own body language to place emphasis on important statements being made (Teekens, 2003). For example, the use of gestures, a change in body posture, or exaggerated body movements can alert the students to important concepts that they need to focus upon during discussions.

Whenever possible, faculty members should provide students with an outline of the key aspects to be covered during a lecture. This will serve as a guide for students and allow them to identify particular areas in which they need to focus their attention (Arkoudis, 2006). For students who may rely upon technology to assist them with learning in the classroom, providing students with audio recordings, video recordings of lectures, or other technology-rich formats—available through an online learning format—can be extremely valuable. This can also reduce anxiety since they can

review the lectures without others necessarily being aware that they are doing so (Arkoudis, 2006).

Classroom Interactions

The use of classroom discussion is critical to the learning process for all students. Through the use of discussions, students are required to think critically which leads to new idea generation, and scrutiny of the topic occurs (De Vita, 2000). However, due to cultural differences, language barriers, and cultural norms, international students are often reluctant to participate in classroom discussions (Kwon, 2009). Many international students feel they cannot adequately express their feelings and ideas through verbal communication (Halic et al., 2009), which creates a risk of failure for international students to participate in discussions (Arkoudis, 2006).

The lack of participation by international students in classroom discussions can lead to stereotypes being assigned by host students and even by faculty (De Vita, 2000). The perception is created that, due to the lack of participation, international students are not knowledgeable and are not interested in being contributors to the learning process (Halic et al., 2009). This stereotyping can distort the way that host students communicate and interact with international students within the classroom, creating a further sense of isolation for international students (De Vita, 2000; Turner, 2009). Further, it can prevent the development of trust among students within the classroom while also creating a sense of cultural divisions (De Vita, 2000). To put it another way, lack of participation can put additional distance between host and international students that leads to cultural rifts instead of cultural appreciation.

Facilitating Discussions in the International Classroom

There are a variety of techniques and strategies that faculty can utilize in order to facilitate effective discussions in the internationalized classroom. Whenever possible, use small groups for discussion activities in the classroom. These smaller groups will be less threatening for the international students, along with the host students, and this will generate more meaningful discussions (De Vita, 2000). If it is early in the academic term before students have become familiar with each other, starting off small group discussion with a quick ice-breaker decreases the intimidation and allows students to begin discussions of an informal nature that can lead to more robust discussions around academic topics (Arkoudis, 2006).

By providing students with discussion topics in advance, they can more adequately prepare for

classroom discussions and formulate some of their responses in advance, which will also decrease the anxiety and encourage participation (Arkoudis, 2006). International students can also be paired up with host students to practice responses to discussion topics. These conversation partners allow for international students to practice their language skills in a non-threatening environment while also receiving feedback on their understanding of the discussion topic, so they feel more comfortable in the group discussion setting (Rose-Redwood, 2010).

As discussions are taking place in the globalized classroom, it is important to hold all students accountable for participating in classroom discussions to encourage participation (Arkoudis, 2006). Faculty members should provide feedback and progress indicators toward meeting the objectives of the discussions, which will further encourage the students to participate (Kwon, 2009). This will provide feedback to the international students indicating whether they understand the discussion topic, and it will also encourage them to further participate when they are providing valuable insight into the topic. While many professors assign grades to classroom discussion, De Vita (2000) discourages this practice since students, who are non-native language speakers, can become intimidated if they feel they are constantly being assessed. If grades are assigned for classroom discussions, it is recommended that the grade be based upon the quantity of discussion versus the quality of the discussion to mitigate any impact that language skills may play in the discussion (De Vita, 2000).

Since international students also have to process what is being said, formulate their response to the question posed, and translate into the host language, faculty members should provide adequate time for these processes to take place when calling on international students before moving on to the next student (Arkoudis, 2006). In order to encourage participation, questions should be periodically presented that include an international perspective to them or a cultural context to which international students are more likely to respond (Arkoudis, 2006; De Vita, 2000). By professors showing appreciation for a response provided, as well as acknowledging a new insight being shared by a student and practicing active listening skills, students will feel more comfortable participating in discussions which will lead to further interactions by the student (De Vita, 2000).

Group Oriented Activities in the International Classroom

Group work in the internationalized classroom plays a vital role in facilitating learning along with cultural understanding and appreciation (Mohsenin,

2010; Summers & Volet, 2008). Group activities allow for varying viewpoints to be explored, facilitate active learning, and encourage more dialogue to take place between international and host students (Summers & Volet, 2008). However, these cross-cultural education experiences do not occur without some associated challenges. Host students can feel that intercultural group work can prevent them from being academically successful due to a perception that language barriers will prevent effective interaction, and this may lead to project submissions that are not aligned with the intended learning objectives due to cultural differences of the group members (Jones, 2010).

When working in cross-cultural groups, the various cultural backgrounds can create their own challenges, often leading to dissatisfaction and an aversion to future group work (Carroll & Ryan, 2005; De Vita, 2000). With the diversity of culture in an international classroom, it is inherent that there will be cultural differences that can lead to a lack of focus, various perspectives on the role an individual should play in the group, and differing communication expectations (Carroll & Ryan, 2005; Turner, 2009). For example, in some cultures, individuals participating in group work are expected to be submissive and their only role is to be supportive of the group leader, while other cultures perceive that the role of individuals is to contribute knowledge and input that will lead to accomplishment of the task at hand (Carroll & Ryan, 2005). These differing expectations lead to additional time being needed for group members to acclimate themselves to the group and to define roles and responsibilities within the group.

Learning is actually enhanced through the use of cross-cultural groups (Carroll & Ryan, 2005; Summers & Volet, 2008). Even with all the associated challenges, cross-cultural coursework experiences foster interactions between host and international students, leading to superior performance compared to homogenous group work, and they allow students to develop varied approaches to solving a problem (Carroll & Ryan, 2005; Summers & Volet, 2008). These benefits are contradictory to the thoughts, held by host students, that language barriers and lack of understanding of the college's academic expectations can lead to lower academic achievement regarding cross-cultural group work (Jones, 2010). While acknowledgement is made that a short-term performance challenge regarding cross-cultural groups exists, mainly due to language challenges and unfamiliarity with cultural norms, long-term benefits far exceed these concerns and facilitate not only academic success, but a better awareness and appreciation of cultural diversity (Carroll & Ryan, 2005; Mohsenin, 2010; Summers & Volet, 2008).

Strategies for Implementing Group Activities

Effective and successful group activities in the globalized classroom begin with effective designing of the tasks and the methods by which the activities will be assessed. It is important to make sure that the task being designed is well suited for a collaborative approach and not an activity that would be better addressed through individual student work (Carroll & Ryan, 2005). The task should also involve all group members and be collaborative in nature, so that students encourage and reward each other throughout the activity while building upon the individual cultures that are inclusive in the group (Carroll & Ryan, 2005). To encourage active participation by all group members, students can be assigned tasks so that each learner has a specific focus such as recorder, time manager, or discussion leader (Arkoudis, 2006 ; De Vita, 2000). By leveraging the various contributions that each team member can provide, especially when relating to differences based upon culture, diverse perspectives and experiences will result (Leask, 2009).

If students in a multicultural classroom are allowed to choose their teammates for a group project, students will have a tendency to select students that are from the same cultural background as they are (Arkoudis, 2006; Carroll & Ryan, 2005; De Vita, 2000). When forming student groups, faculty members should play a role in the group formation process. By doing so, faculty will ensure that all students belong to a group, while also making the groups' diversity rich (Arkoudis, 2006; Carroll & Ryan, 2005; De Vita, 2000; Jones, 2010; Kingston & Forland, 2008). By involving faculty members in the group selection process, a cross-cultural group can be formed, and international students, who may be reluctant to insert themselves into a group, will experience less anxiety if the faculty member facilitates that process for them.

In order for students to better understand effective interpersonal communication strategies to use in a culturally mixed environment, faculty members should emulate the types of behaviors that are conducive to interacting across various cultures (Carroll & Ryan, 2005). For example, a faculty member should avoid tendencies to raise his or her voice when speaking to an international student, ensure that international students are called upon in the classroom, and ensure various ways of encouraging international students are demonstrated (Carroll & Ryan, 2005; De Vita, 2000). Even developing a process for how to handle communication challenges, language barriers, and other disagreements associated with working in a culturally rich group can allow students to quickly resolve any challenges that do arise with minimal interruption to the group activity, and it also avoids situations arising that

could lead to cultural insensitivity (Carroll & Ryan, 2005).

When introducing a group activity to students, it is important for all students to understand the intended outcome of the activity and the value they will gain from completing the activity, especially any cross-cultural lessons that are to be learned (Leask, 2009). Faculty members should be explicit in their directions and establish timelines so students can identify if they are on track for successful completion of the activity (Carroll & Ryan, 2005; Leask, 2009). This will reduce the burden on the students attempting to identify what they are to accomplish, which will allow them to focus on the cross-cultural interactions and learning from the unique perspectives that each member brings to the group.

To successfully implement group activities in the internationalized classroom, it is important to allow students an opportunity to become familiar with one another before beginning any formal group activity (Gabb, 2006; Kingston & Forland, 2008). By using these informal group activities, students will begin to better understand each other, and they will begin to shape their social environment within the group (Gabb, 2006). Students can begin exploring how to properly pronounce names of each group member, identify how each individual would prefer to be addressed, and begin acknowledging the unique strengths and insights that each student brings to the group (Gabb, 2006).

Assessment Practices

Faculty members should be aware of cultural differences, in general, relating to how education and learning is approached by the different international students. By doing so, professors are better able to address the varying learning styles of students and provide an approach to assessment that will allow all students an opportunity to demonstrate their acquisition of knowledge and new skills, regardless of culture. In the Eastern cultures, an emphasis is placed on academic success, as measured on standardized tests, which generates a climate in which a high test score is the main indicator of success and influences job selection, salaries, social status, and overall quality of life (Edmundson, 2007). Since Eastern students are accustomed to this emphasis on testing, being evaluated based upon thought process, creativity, and interactions with their fellow classmates and professor can create high levels of anxiety and stress. Professors must use a variety of assessment techniques in order to effectively assess all students in the classroom while not ignoring any cultural customs that may exist (Edmundson, 2007). This could even include providing students with a variety

of assessment methods and affording students the opportunity to determine what assessment they would like to utilize to demonstrate their mastery of the subject matter (Carroll & Ryan, 2005).

When designing assessments for the internationalized classroom, faculty members need to be careful of developing assessments based upon the host culture's hidden assumptions. In other words, faculty members shouldn't assume that all students will understand what it means to complete a particular type of assessment, such as writing a comparative essay, since writing styles can be different across cultures (Carroll & Ryan, 2005; Edmundson, 2007). Rather, professors should explicitly state what is expected of the students in completing the assessment, provide examples of what is expected, and take into account the amount of time that may be needed by a student who is being exposed to this form of assessment for the first time (Arkoudis, 2006; Carroll & Ryan, 2005; Edmundson, 2007). The introduction of grading rubrics can be especially beneficial to international students in order to clearly delineate how they will be assessed and what should be included in their submission, as well as to allow students to ask questions regarding unfamiliar expectations in advance (Edmundson, 2007).

Since cultural contexts and language barriers can lead to incorrect interpretations of directions and expected outcomes in a globalized classroom, professors should focus the outcomes of learning activities more on the processes utilized to arrive at a solution rather than the solution itself (Edmundson, 2007). To assist faculty members in evaluating student work based upon the processes used rather than the actual outcome or product, authentic assessments are beneficial in the culturally diverse classroom (Airasian & Russell, 2008; Edmundson, 2007; Leask, 2009). Objective assessments focus on the ability to identify and select the right answer, whether it is through the use of multiple choice, matching, or true and false questions (Airasian & Russell, 2008; Carroll & Ryan, 2005). With authentic assessment, students are presented with a clearly defined task that requires them to apply acquired skills and knowledge in order to reach a solution. Not only does this allow students to demonstrate the processes utilized to arrive at the solution, but it allows students to apply their knowledge to real-world situations and problems (Airasian & Russell, 2008). Faculty members should also be encouraged to include international components into the classroom assessments, such as international case studies, which will allow international students to make a connection with the material so they can

focus on the actual assessment product and not the cultural context (Carroll & Ryan, 2005).

When evaluating student work, it is important for faculty members to provide formative feedback along the way, whether through classroom activities leading up to the formal summative assessment or through the submission of drafts for review (Carroll & Ryan, 2005; Jones, 2010). This will allow students to identify if they are meeting the expectations and provide them an opportunity to make adjustments if they are not meeting expectations. After submission of the assessment, international students appreciate timely feedback on their work along with detailed reasons for the grades they are receiving (Carroll & Ryan, 2005; Edmundson, 2007; Jones, 2010). General feedback such as, "You didn't meet the requirements of the assignment," is too vague, and it also won't assist the student in being successful on future assessments (Arkoudis, 2006). Again, the use of rubrics can assist with providing feedback to students and assist them in understanding how the professor arrived at the grade he or she did.

Faculty members should embrace the use of written work, especially essays, in assessing student learning, and this can also assist in overcoming any language barrier that may exist in the classroom (Kingston & Forland, 2008). Such assignments allow students to spend time in evaluating their written work to determine if their meaning is clear, and they can also reduce the anxiety that can be associated with being evaluated through verbal interactions (Kingston & Forland, 2008). In order for this to be successful, however, faculty should avoid timed writings that can create undue pressure and stress on the students that may be facing language barriers (Kingston & Forland, 2008). The elimination of timed writings allows the students to reflect more upon their writings in order to ensure they are conveying their thoughts accurately.

Conclusion

As the world becomes a more globalized society, interactions among various cultures will increase. For these interactions to be meaningful and beneficial, an understanding of each culture is required. Through internationalization of the classroom, higher education can play a vital role in fostering this cultural awareness, begin forming cross-cultural relationships, and provide a forum for developing effective interactions that will benefit a globalized society. Additionally, students in a cross-cultural classroom will be afforded opportunities to develop and refine various methods of interacting with individuals with different backgrounds and cultures in preparation of jobs and careers that will require interactions in a globalized marketplace.

While the internationalization of the higher education classroom provides many benefits, challenges are also associated with a culturally diverse and rich environment. Each culture that is represented possesses varying expectations, perceptions, and prejudices based upon their cultural norms and experiences. Unless these differences are recognized and addressed, a true globalization of the classroom will not exist. Rather, students from different nationalities will co-exist in the same classroom, but intercultural learning will not occur.

The faculty plays a crucial role in establishing a classroom environment that will lead to intercultural learning taking place, while also providing ample opportunities for international students to experience academic success. Faculty members need to be cognizant of the cultural diversity that exists in their classrooms, and also how their own cultural experiences influence their pedagogy. Factors such as language barriers, reluctance to participate in classroom discussions, and unfamiliarity with assessment techniques can all hinder the academic success of international students. However, these challenges can be overcome through an awareness of the cultural differences and similarities that exist in the classroom and the utilization of varying teaching techniques. While these strategies and techniques meet the needs of international students in the classroom, host students will also benefit, allowing for academic success and an appreciation and awareness of cultural differences and similarities that exist in our world.

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Encouraging Students to Read: What Professors Are (and Aren't) Doing About It

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Reasons are examined as to why students are reluctant to complete assigned textbook readings on a timely basis. Prior research suggested that lack of student motivation, lack of student knowledge of effective study habits, competing demands on student time, and lack of congruency between student objectives for the course and professor objectives for students could be the cause. Our empirical research indicated that both the textbook and the professor can impact student willingness to complete assigned readings. Students (n=394) suggested that a good textbook be reasonably priced (\$50 or less), concise (short chapters), loaded with great graphics, and easy to understand. Business faculty (n=77) shared ideas on how they encourage students to prepare for class by completing their assigned textbook reading. The authors divided the responses into one of two general categories: (1) requiring additional student preparation prior to class, or (2) incorporating in-class activities designed to measure the degree of student preparation. These responses were then categorized as reflections of professorial assumptions (Theory X or Theory Y) regarding their students. One author shared his success with the use of Thoughtful Intellectually Engaging Responses (TIERs) and Reading Logs. The authors conclude that an effective approach will require professors to develop course pedagogy that will attack multiple reasons for lack of preparation simultaneously so that we can reach all students who would otherwise remain unprepared. Suggestions on how to continue the dialog on this topic as well as suggestions for future research are provided.

The purpose of this descriptive research study was to identify reasons students do not complete assigned readings for courses and the pedagogical practices that faculty employ to encourage student reading. Assigned readings were defined as course texts, supplemental articles, etc. Pedagogical practices were defined as in- and out-of-class assignments to foster reading and reflection.

Two overarching research questions guided this study:

1. What reasons do students cite for not completing the required readings for courses?
2. What pedagogical methods do faculty employ to encourage student reading?

Related Literature

The literature on student compliance with assigned reading is large and varied. Consistent with the overarching research questions that guided our study, we consider the following issues in reviewing the related literature. First, what is the scope of the problem, or how much reading do students actually complete? Second, why does the problem exist, or what reasons do students offer for not completing their assigned reading? And third, what can be done about it, or what pedagogical methods do faculty employ in remediating the problem?

How Much Reading Do Students Actually Complete?

Many professors would not be surprised to find that student compliance with assigned readings is low.

Clump, Bauer, and Bradley (2004) found that 27.4% of undergraduates complete their assigned reading before class, while 69.98% completed it before a test. Results at the graduate level are little improved, as Clump and Doll (2007) found that only 54.21% of their masters-level students read their assigned reading before class, and 84.21% did so before a test.

The problem is getting worse over time. Burchfield and Sappington (2000) conducted a longitudinal study of student compliance with assigned readings, and they found that the compliance rates “declined dramatically” (p. 59) between 1981 and 1997.

Non-compliance with assigned reading is not limited to any particular discipline or subset of disciplines. Much of the evidence is drawn from psychology courses (Burchfield & Sappington, 2000; Clump, Bauer, & Bradley, 2004; Clump & Doll, 2007; Durwin & Sherman, 2008; Johnson & Kiviniemi, 2009; Van Blerkom, VanBlerkom, & Bertsch, 2006;). However, Artis (2008) writes about students in his business classes; Broost and Bradley (2006) report evidence generated from a class in philosophy; Henderson and Rosenthal (2006), as well as Jensen and Moore (2008), write about science classes; Howard (2004) discusses evidence from his sociology class; Mokhtari and Sheorey (1994) and Chang (2010) report on students enrolled in ESL (English as a Second Language) classes; Peterson (2006) finds evidence in classes in communications; and Carney, Fry, Gabriele, and Ballard (2008), Tomasek (2009), and Barnett (1996) report evidence from education classes.

Compounding the problem, the quality of reading experience that students typically have may be far less

than professors believe is optimal. Wandersee (1988) describes the reading experience necessary to master complex material as a sequential process consisting of: (1) finding the meaning the author presents, (2) deciding upon its significance, (3) learning the meaning, (4) relating the concept to past experience, and (5) continuing to practice and review what was learned. It is this type of experience that many professors have in mind when they suggest a minimum study time of 2 hours outside of class for every one hour in class. By contrast, Sikorski et al. (2002) found that most students report reading their textbooks less than three hours per week.

Why Are Compliance Rates Low?

Reasons suggested for poor student compliance vary widely. A recent study found that the majority of college graduates receiving bachelor's degrees are not proficient at reading (National Endowment for the Arts, 2007). Employers concur with this assertion, indicating that many graduates lack the reading skills necessary to perform basic job-related tasks. (Casner-Lotto & Barrington, 2006). Anecdotal evidence is offered by Long (2009) who states

Anyone who has used reading aloud in a college classroom as a learning tool can attest to the fact that many students struggle painfully with reading, stumbling over words. Such readers cannot enjoy reading, not to mention make effective use of the skill. (p. 12)

Artis (2008) reports the following:

I made the mistake of randomly calling on college students during class to read aloud from their textbooks. I intended to show how reading the textbook in advance prepared them for class discussion, but this actually embarrassed and angered many students. It caused students with deficient reading skills to avoid coming to class. (p. 134)

The decline in reading by college students may simply mirror a decline in reading rates of our overall population. A national survey of the reading habits of U.S. adults found that in the past 20 years the percentage of adults participating in literary reading declined from nearly 60% to below 50% (National Endowment for the Arts, 2004). The decline in reading was noted over all age groups, but young adults (18-34 years of age) experienced the highest rate of decline, and the 18-24 age group, which earlier had the highest reading participation rate, showed the lowest rate in the most recent study.

Lack of student motivation may also play a role (Rothkopf, 1988). Reading most college texts requires deliberate effort, is time consuming, and is not the most entertaining activity. Students may simply view the cost of studying, in terms of opportunity costs, as too high. A similar finding is offered by Nolen (1996) who concludes that a lack of congruence between professor goals and student goals may contribute to student non-compliance with reading assignments. For example, some students may have a goal of simply passing a particular course, and perhaps they conclude that this goal can be achieved without reading the text.

A different view is offered by Jolliffe and Harl (2008), who found that students do read, but they do not necessarily read their textbooks. They concluded:

The majority of students spend lots of time reading online documents. A substantial majority of them read their *Facebook* sites almost daily, sometimes for extended periods. Most of them read while doing something else: listening to music, checking emails and sending instant messages, watching television, and so on. (p. 605)

Jolliffe and Harl (2008) also found that:

. . . our students were reading, but they were not reading studiously, either in terms of the texts they were engaging with or the manner in which they read them . . . they saw the reading that they had to do for school as uninspiring, dull, and painfully required. (p. 611)

Derryberry and Wininger (2008) offer some insights from their own field of social psychology to explain why some students engage in textbook reading while others do not. Their hypothesis is based on the fundamental principle that motivated learners are also self-regulated in their learning efforts. The authors therefore emphasize linkages between textbook usage and three motivational constructs related to self-regulation: the need for cognition, goal orientation, and self-determination theory.

The need for cognition refers to an individual's tendency to participate in and enjoy effortful thinking. Derryberry and Wininger hypothesize that students with a high need for cognition will seek out opportunities for this type of thinking. Textbook reading can provide just this type of activity, especially if the text is challenging.

Goal orientation has a more complex relationship to textbook usage. The authors cite two types of goals: mastery goals and performance goals. Mastery goals are task-oriented, and they relate to increasing competence, developing new skills, or achieving a sense of mastery. Performance goals, on the other hand, focus on

avoiding the negative judgment of others or attaining the positive judgment of others. Derryberry and Wininger hypothesize that students with a mastery goal orientation will normally have the strongest motivation to read texts, but they note that those with performance orientations may also be regular text users, especially if the text is not perceived as too difficult.

Self-determination theory also offers an explanation of why some students read their text and others do not. Self-determination theory identifies two sources of motivation; self-motivation, which is described as autonomous and innate, and other-motivation, which is described as environmental or reactive. According to the authors, individuals who are self-motivated should be expected to use their texts more and engage in more reflective and deeper information processing.

The authors administered a variety of psychological tests designed to develop motivational profiles of their students, and then they tested the above hypotheses against student responses to their texts. Their hypotheses were confirmed. They concluded, “. . . [E]fforts on the part of instructors to determine the texts that are most congruent with student motivational orientations can increase the probability of a text’s usage” (Derryberry & Wininger, 2008, p. 10). While this finding is not without merit, it would be extremely difficult for professors in most disciplines to replicate Derryberry and Wininger’s methods.

The ideas of Derryberry and Wininger are related to Dweck’s theory of a growth mindset. (Blackwell, Trzesniewski, & Dweck, 2007; and Dweck, 1999). Dweck believes there are two ways in which individuals perceive their intelligence. Those with a fixed mindset believe that intelligence is an innate trait. This leads to an avoidance of effort, because if one has the necessary level of intelligence, new information should come easily. Those with a fixed mindset tend not to handle setbacks well, and they withdraw their effort if met with resistance. In contrast, Dweck labels a growth mindset as one in which individuals believe intelligence can be developed over time. Those with a growth mindset welcome challenges as opportunities to grow. They value their effort, and they are adaptive in the face of challenges and failures. Dweck’s work would suggest that students don’t read their texts because they have developed a mindset that tells them that the challenge of reading technical material is too great. Such students might even acknowledge that the text contains information that is important to them in learning course content. (We are grateful for the comments of an anonymous reviewer who pointed this out.) Professors can help develop a growth mindset in their students by emphasizing challenge rather than accomplishment, grading for growth rather than achievement, and emphasizing a sense of progress in student work.

Some studies indicate that professors themselves are at least partially responsible for student non-compliance with reading assignments. Brost and Bradley (2006) refer to the “vicious circle” of the assigned reading process with the following example:

Suppose in order to teach Aquinas’ proofs for the existence of God, we assign the corresponding passages from *Summa Theologica*. How are we to use this reading? Do we expect the students to understand the arguments without further explanation? We recognize that this is probably too much to expect from the students, or worse, we suspect that too many students failed to read the assigned passages. Instead, we are likely to explicate the arguments in class and directly walk them through the text. Students, in turn, may simply not read, waiting for the instructor to cover the reading for them in class. . . . Of course, there should be, and often is, direct discussion of the reading in class; the question is how to do it in such a way that we do not undermine students’ need to critically read on their own. (Brost, & Bradley, 2006, p. 107)

Brost and Bradley admit that students often do not understand the role of assigned reading. However, for the faculty they observed in their study, they also noted that “. . . much of the assigned reading did *not* have an overt pedagogical role; over half the faculty didn’t even use the assigned reading in (any) apparent way within their class time” (p. 106).

Brost and Bradley find that “. . . faculty are clearly a piece of the compliance problem” (p. 108). They believe that college professors are not taught enough about teaching pedagogy, and that more training in this area is necessary.

In their student survey, Maher and Mitchell (2010) found that students have a desire to complete assignments successfully but are uncertain how to balance workloads and are uncertain that they have the necessary skills. Specifically, they found that (1) there was a lack of clarity about expected workloads, (2) students perceived a lack of guidance about the appropriate amounts of reading and strategies to complete their reading, and (3) there were student concerns about correctly identifying the purpose of assignments and whether they possess the necessary skills for completing the assignments. Students found it especially frustrating when there was not a close correlation between reading and lecture themes (p. 142). Finally, students felt that faculty members really don’t expect them to keep up. As one student stated, “Make sure you keep up with the reading’ (they say), and everyone nods, and we all know it’s not going to happen” (p. 142).

Similar conclusions are drawn by Ericsson and Lehmann (1996) who conclude that many students do not know how to study. This is particularly applicable to younger students early in their college careers. An increasing proportion of students find a lack of challenge in their secondary education curricula, and thus they come to the university with a lack of study skills.

Barnett (1996) concludes that competing demands on students' time plays a role in lack of reading assignment completion. The author states that more and more students today have part time (or full time) jobs which place demands on their time. They seem overly optimistic with regard to their ability to juggle the demands of these jobs with the demands of their college work. Additionally, Barnett cites family pressures on student time, as well as social events and personal issues, which impinge on their ability to devote the necessary amount of time for study. These factors not only restrict the amount of time, but the amount of available energy left over to devote to study.

Pedagogical Suggestions Designed to Get Students to Read

Instructors frequently respond to student non-compliance by administering quizzes. Johnson and Kiviniemi (2009) require students to complete an online quiz no later than the beginning of the week in which the related material is to be discussed in class. They report that this requirement has raised student comprehension, as measured by their scores on subsequent exams. Howard (2004) reports success with "Just-in-Time" quizzes, which are administered online and are due no later than 2 hours before class meeting time. He then spends the 2 hours prior to class grading the quizzes, which gives him insight into student response to the reading and where potential issues of comprehension lie. Carney et al. (2008) experimented with three different methods of administering reading quizzes. Students were given a list of five generic questions, based on Bloom's Taxonomy, which could be applied to all their reading for that class. These questions served as a study guide for students to help them gain needed perspective on the assigned material. Under a Monte Carlo Quiz method, the issue of whether or not a reading quiz would be administered that day and what question (from the five) was to be asked was decided by a random process (roll of the die) done in front of the class. With the second method, the professor decided in advance whether or not there would be a quiz, and if so, what question would be asked. Students were told to expect a quiz on most days. With the third method, students prepared a learning log outside of class and submitted it for grading. The authors found that all three methods

generated significantly higher rates of student compliance with reading assignments. However, the Monte Carlo method was significantly less popular with students, and the learning log method was significantly more popular (pages 198-199).

Interestingly, Barnett (1996) reports that poor quiz grades do not prompt his students to change their study behavior. He advocates searching for alternative strategies.

Henderson and Rosenthal (2006) advocate reading questions as an alternative to quizzes as a pedagogical device to encourage students to complete assigned reading. Reading questions are questions that the student poses to the instructor after completing the assigned reading. They can be submitted online. The authors state, "In reading quizzes, students rely on the teacher to assess their understanding. We would like students to become better at assessing their own understanding" (p. 47). Smith, Holliday, and Austin (2009) also found that question-based approaches were more effective than re-reading in improving student comprehension of difficult text passages. Van Blerkom et al. (2006) found that students who generate questions on their assigned reading performed better on subsequent exams than students who copied, highlighted, or took notes on the same material.

In a recent study, Tomasek (2009) demonstrates how questions (prompts) can promote critical reading and assist students in synthesizing the big ideas from a reading selection. She identifies six categories of prompts that are closely connected to the development of critical reading: (1) identification of the problem or issue, (2) making connections, (3) interpretation of evidence, (4) challenging assumptions, (5) making applications, and (6) taking a different point of view. Specific examples of prompts from all six areas are identified. She emphasizes the importance of the professor's rationale or objectives for the assignment in the determination of which of the six areas will be selected.

While faculty members often cite poor student skills as a reason for non-compliance with assigned reading (Long, 2009), and students themselves report uncertainty about their ability to complete assignments (Maher & Mitchell, 2010), a relatively small number of studies report on the results of faculty attempts to incorporate training in reading skills into their classes. L'Allier and Elish-Piper (2007) report success with five different strategies designed to improve student reading comprehension. It is interesting to note that their work was done with students enrolled in literacy methods classes designed for education majors.

Artis (2008) found that devoting time to the SQ3R approach to developing reading skills pays off for his business students. SQ3R is a sequential, self-regulated

reading method that asks students to *Survey*, *Question*, *Read*, *Recite*, and *Review*. He describes in depth how he trains students in this approach and the improvement that it generates.

Peterson (2006) suggests that, for especially difficult material, professors should have groups of 2-3 students generate summary sentences of especially difficult passages (2-3 paragraphs). The summary sentences can be written on the board or on the computer with a projector. The summary sentences can then be combined sequentially into summary paragraphs which cover longer passages.

Some professors have found success with altering the type of assigned reading. Howard (2004) uses readers rather than the typical large, comprehensive text often used in introductory survey courses. As rationale, he cites Pugh, Pawan, and Antommarchi (2000) who found that these texts represent the kind of reading least likely to be associated with higher levels of cognitive development. In contrast, Durwin and Sherman (2008) found that the choice of a text in introductory classes makes very little difference in student comprehension. They find that these texts are increasingly homogeneous with respect to organization and approach, and they suggest that this is probably a market-driven phenomena.

Stokes-Eley (2007) discusses how to incorporate Kolb's experimental learning theory into student-led chapter presentations. Kolb's theory describes learning as a series of 4 modes: (1) concrete experience (feeling), (2) reflective observation (watching), (3) abstract conceptualization (thinking), and (4) active experimentation (doing). Specific suggestions are offered for each of the four modes. Unfortunately, this pedagogy insures only that the student(s) making the presentations have actively engaged in the text reading, and this does little to insure that others in the class have engaged at a similar level.

Chang (2010) suggests that a self-monitoring strategy on the part of students will generate improved academic performance and greater student motivation. The recommended self-monitoring activity consists simply of keeping a log outlining the time and place of study, with whom, and a score prediction on the next exam.

Method

In an informal survey of students enrolled in his business classes, one of the authors obtained the results displayed in Table 1. Concerned with the lack of class preparation reflected in the Table 1 results, he followed up with a survey of 394 business undergraduates at five colleges in the Midwest, and he obtained the results in Table 2.

Assuming the 4.5% that do not have textbooks are included in the 10.6% who read less than 10% of their assigned textbook readings, that leaves 6.1% of students who have the textbooks but still only read less than 10% of their assigned textbook readings. There appears to be no significant difference in these results based on gender. However, the data show that students tended to read more in classes that deal with their particular major or concentration. Figure 1 compares the reading compliance rates between beginning students enrolled in Foundations of Business (n=30) and undergraduate survey respondents overall (n=394). Not surprisingly, the compliance rates for beginning students are much lower.

Students were asked to identify reasons why assigned readings were not completed. Reasons were selected from category options predefined on the questionnaire. The categories were developed using findings previously reported in the literature. Table 3 lists the student responses. It is important to note that the proportions sum to greater than 100% because multiple responses were permitted.

By selecting a "good" textbook, the professor may diminish the resistance students have towards required reading assignments. Students were asked to define their own version of a good textbook by selecting from predefined categories based upon those discussed previously in the literature (Broost & Bradley, 2006; Derryberry & Wininger, 2008; and Durwin & Sherman, 2008). Analysis of the 365 responses reveals the data displayed in Table 4. It would appear that students define a good textbook as one that is reasonable priced, concise, loaded with great graphics, and easy to understand. These themes have also been mentioned in the research cited above. But having a great textbook does not guarantee that the book will be read by the students. Hopefully, professors can employ strategies that can improve student reading and preparation. With this in mind, the authors asked business faculty at liberal arts colleges nationwide to respond to the following two open-ended questions/issues:

- "What can I do to encourage students to prepare for class by completing their assigned textbook reading?"
- "I know the use of the "pop quiz" or chapter quiz is one approach. I'm looking for additional ways to encourage students to read their textbooks."

The issue struck a sensitive nerve, and it elicited an immediate outpouring of response from faculty. Some responses were brief, some lengthy; some respondents indicated they felt the problem was hopeless and had no suggestions, while others offered detailed

Table 1
Informal Survey (n=30) Foundations of Business Class

Proportion of Students	% of Assigned Reading Completed
50%	less than 10%
25%	10% – 25%
5%	26% – 50%
15%	51% – 75%
5%	76% – 100%

Table 2
Survey (n=394) Business Undergraduates: % of Assigned Reading Completed

Proportion of Students	% of Assigned Reading Completed
4.5%	Did not own the textbook(s)
10.6%	0 – 10%
11.1%	11 – 25%
13.2%	26 – 50%
17.8%	51 – 75%
42.9%	76% – 100%

Table 3
Survey (n=394) Business Undergraduates: Reasons for Not Completing Assigned Readings

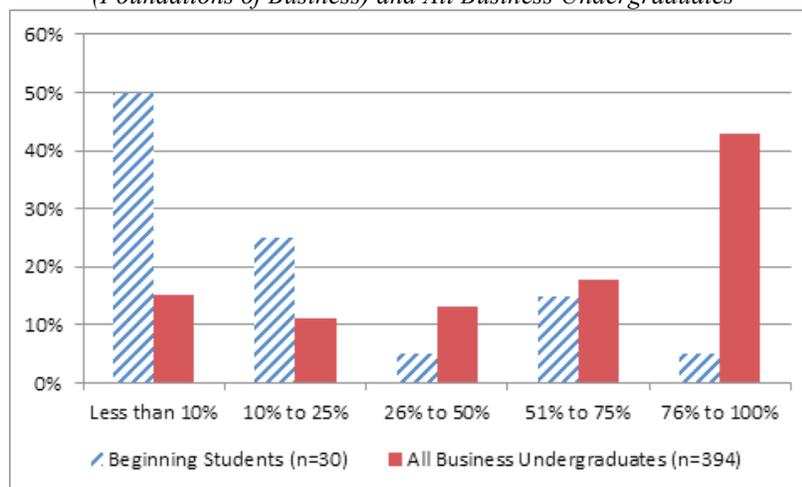
Proportion of Students*	Reason for not completing assigned readings
48.2%	Lack of time
26.8%	Boring
20.2%	Not meaningful
20.2%	Professor rarely refers to the textbook
13.8%	Material to be read is not on the test
9.2%	Difficult to read
9.2%	Just want to get by

Note. *Sums to greater than 100% due to multiple answers

Table 4
Survey (n=365) Business Undergraduates: Defining a Good Textbook

Proportion of Students	A good textbook is...
28%	Cheaper price (\$50 or less)
17%	Essential information stated once—skip all the details; shorter chapters; not redundant and boring; rich, but brief, content; not a lot of fluff
15%	Better graphics for visual learners and good use of color
14%	Well written; easier to understand
8%	Relevant information that is up to date
7%	Use of examples; apply theory with practical examples—relates to real life; stories to keep me from falling asleep
11%	Other

Figure 1
*Percentage of Assigned Reading Completed: Beginning Students
 (Foundations of Business) and All Business Undergraduates*



programs and classroom pedagogy which they were convinced would work in a larger setting. In all, we received 135 different suggestions from 77 faculty (about 15% response rate) from several institutions of higher learning. Obviously, a number of business faculty suggested multiple solutions. We believe this is a good response rate considering that we employed no techniques, either sophisticated or unsophisticated, to enhance the rate of response among the initial recipients of the survey.

Results

Our survey generated several recommendations and suggestions for handling the problem, yet many faculty members commented on their frustration over this issue. Comments like those below were typical.

- “I’m sure you will hear from any number of faculty who will confirm this is a problem . . .”
- “I’m glad to hear that I’m not the only one who struggles to get students to read the assigned material before class.”
- “Great question and probably one that many have asked for years.”
- “I think this is a question we are all struggling with, so I appreciate your bringing it to the full forum.”

Faculty members were asked to provide suggestions on handling the assigned reading problem through an open-ended question. Responses varied quite a bit, but they were not difficult to analyze if handled on a step-by-step basis. First, we

divided the suggestions into one of two basic categories: (1) responses calling for additional student preparation prior to class, and (2) responses that incorporate in-class activities. Although categories as basic as those above did pose a classification for most cases, there were a few miscellaneous responses which did not fit into either of the two categories above. The clustering was done by one of the authors, and it was reviewed by a colleague (not involved with our study) at the same institution.

We categorized faculty responses as follows:

- 9% involved in-class activities designed to measure the degree of student preparation.
- 31% involved additional student work prior to class.
- 20% did not fall clearly into either of the above two categories.

Once the responses were divided into the above groups, they were reviewed once again to identify basic similarities. Using common words and themes, the responses from each major category were grouped into a relatively small number of sub-categories. These responses are discussed below.

Discussion

In-class Activities Designed to Measure Student Preparation

The largest category of respondents recommended various in-class activities to measure the degree of student preparation. Of this group, the most frequently

mentioned activity was a daily or weekly quiz, with the questions coming from the assigned reading (n=22). Most instructors who recommended this tool used multiple choice questions, but a minority (n=6) suggested essay type questions for these quizzes. Many faculty also suggested that the lowest quiz score be dropped at the end of the semester.

A few faculty members (n=6) recommended student presentations covering material in the assigned reading be required. Motivation for incorporating this strategy seemed mixed, as some faculty indicated it was a way to “get out from in front of the class.” Of course, this technique insures that only the presenting group has completed the assigned reading, and its impact on the level of preparation of the rest of the class is questionable.

Another suggestion that received the endorsement of a number of professors (n=5) was incorporation of specific exam questions which were covered in the reading only. This, of course, gives those students desiring a high grade incentive to complete the assigned reading in the text. Unfortunately, these are probably the same students who would read the text anyway, and so its impact on the marginal student is questionable. Recall that previous research from the education literature indicates that students rarely change their study habits in response to receiving poor grades (Barnett, 1997).

A few faculty members (n=4) mentioned oral questions, covering the assigned reading, be directed to students on a random, unannounced basis during class. Some professors using this technique then included a “class participation” component in student grades, but others said this was unnecessary, as the pressure not to look bad in front of their peers would be sufficient to insure adequate student preparation.

Other faculty responses categorized in this group include obtaining signed statements or pledges from students indicating whether they have read the material (n=2), assigning specific questions for group study (n=2), adjusting lectures to make sure that none of the material in the text was repeated in class (n=1), incorporating games into classroom time (n=1), and creating an “activity-based learning environment” (n=1).

Activities Involving Student Preparation Prior to Class

Several respondents recommended a wide variety of activities for students to complete prior to class, designed to insure that they had completed the assigned reading. The responses in this category varied widely. They included requiring chapter summaries (n=7), incorporating various pedagogical aids that can be obtained from publishers or from the Internet (n=6), assigning end-of-chapter questions and other

assignments (n=5), keeping a class journal (n=3), requiring an “interaction paper” (n=2), completing quizzes (on Blackboard) prior to coming to class (n=2), responding to discussion questions (on Blackboard) prior to coming to class (n=2), and one suggestion each for cases, chapter outlines, course notebooks, argumentative essays, research papers, and citations.

Faculty Recommendations That Did Not Fit Neatly into One of the Two Categories Above

A number of faculty made comments and recommendations that were interesting, but difficult to categorize. We identify and discuss these in this section.

A surprising number of professors (n=5) indicated that the solution to the problem was to get rid of the assigned text! Motivations behind this suggestion varied, with some faculty members questioning the wisdom of assigning a text that students won’t read anyway and others saying that current texts are poorly written and are thus of questionable value.

Finally, two faculty members said the problem has “no solution.” This is a response which we had difficulty fitting into one of the previous groups!

Comments

In this section, we offer several of our own reactions to the suggestions offered by faculty, and we offer some additional recommendations in the area of course pedagogy.

Extrinsic (Theory X) vs. Intrinsic (Theory Y) Motivation

The fact that almost 50% of all responses recommended such activities as in-class quizzes, discussion questions based on the reading, and random (forced) participation was a disappointment to us. By their very nature, these activities threaten students with either a poor grade or with embarrassment in front of their peers (if they cannot answer the discussion question in class). In fact, several faculty members mentioned such peer pressure as a significant motivator!

There are two fundamental approaches that can be used to motivate others, and at the risk of oversimplification, these can be represented as the use of “Theory X” style of management vs. the use of “Theory Y.” The use of in-class quizzes and random discussion questions designed to embarrass unprepared students are examples of using extrinsic motivators. This approach is inferior to the use of intrinsic motivators, and it has long-term side effects. Even our original questionnaire mentions a desire to find approaches other than quizzes to motivate students.

In Principles of Management classes taught at business schools nationwide, we discuss the use of a Theory X style of management vs. the use of Theory Y. Survey results indicate that business faculty may be guilty of teaching the drawbacks of Theory X while simultaneously incorporating it in dealing with their own students! MIT professor Douglas McGregor influenced organization development theory with his well known Theory X and Theory Y (McGregor, 1985; Weisbord, 1987). McGregor claimed that management may assume that employees naturally want to take responsibility and perform well on their jobs (Theory Y), or management may assume that employees are lazy and passive, not caring about their job performance (Theory X). Managers who accept Theory X will attempt to control the work environment through external controls. On the other hand, those who accept Theory Y are more likely to build upon the employees' internal need to perform well and help the employees do just that. Professors who lean toward Theory Y are likely to trust students to be self-directed learners who want to do well in their courses. In our context, Theory X professors would more likely provide only extrinsic motivation (e.g., a quiz) to force student to complete their assigned readings.

Most faculty recognize the importance of “life-long learning” for today’s students. With the pace of change in the workplace expected to accelerate in the coming years, we cannot possibly prepare our students for everything they will encounter in their careers. One of the important goals of any modern education is to instill a “love of learning” within our students so that they will be more likely to engage in a lifetime of learning after they graduate. It is difficult to see how threatening students with embarrassment in front of their peers if they don’t answer a discussion question, or forcing them to read the text so that they can pass a quiz consisting of ten multiple choice questions, will instill this love of learning.

Are the various out-of-class activities recommended by faculty effective?

A second category of faculty responses involved using various out-of-class activities as a means to check on student preparation. Recall that these activities consisted of assignments such as the completion of discussion questions and end-of-chapter problems and cases, keeping a journal, writing chapter summaries, etc. At the same time some faculty members were suggesting these activities, other professors were critical of them, indicating that they cannot be expected to produce the intended results. Comments reported by respondents included the following:

1. “Merely assigning problems and questions, answers to which can be figured out if you

have read the text assignment, does not work. Mostly, they just play hunt and paste.”

2. “Books with chapter summaries are a tempting crutch.”
3. “A colleague of mine requires his students to keep a course notebook that includes all their chapter outlines, end-of-chapter quizzes, etc. Students hate this ‘busy work’ . . .”
4. “I thought this year that I would finally solve the problem by signing up for the Aplia course support package. . . . I think I found that Aplia was a substitute for, not a complement to, reading the basic text.”

The “Unclassified” Group of Faculty Suggestions: Is Abandoning Required Reading the Answer?

We question the wisdom of faculty suggestions to abandon required reading. While this may be popular with (some) students, it does not encourage students to foster the level of commitment and dedication that will be required of them in the corporate world. The notion that students don’t have to read texts because they are “boring” or are “poorly written” is one that is difficult to defend. As evidence, we offer the comment of one faculty respondent, who reported the following:

A recent graduate told me he had to read a 500-page computer manual his second week on the job. Some employers expect college grads to be able to read hard stuff and learn it fast.

We believe the world of work is placing more demands on graduates, not fewer. Students trained to succeed in a challenging academic environment while still in school are better prepared for career success than those who are allowed to drift through with little or no effort.

There is no doubt that changes in textbooks could make many of them more appealing to students. We suggest shorter chapters and stronger visual appeal, such as the use of color and graphics. Recently, most publishers have moved in this direction, but the lack of reading is still an issue with students. It is clear that these changes alone do not offer a complete solution.

Case Study

One author tried using Course Preparation Assignments (Yamane, 2006) over a period of three semesters and met with some success. However, the author had created a Course Preparation Assignment (CPA) for every reading across all his four of his classes, and he found that the workload was overwhelming (for him and for his students). As a result, CPAs evolved into TIERs—Thoughtful Intellectually Engaging Responses.

Each TIER asked questions that could only be adequately answered if the student had thoughtfully completed the assigned reading. TIER questions also tended to be very either application oriented or reflective. For example, students would respond to this question after reading an assigned reading on management styles:

Think about the ‘best’ and ‘worst’ managers that you have experienced. List the characteristics of each (best versus worst) that lead you to your conclusion (for example, leadership style). What did you learn from each in regards to how to be a good manager? What did you learn from your assigned reading that would also help you become a good manager?

In addition, students kept a Reading Log throughout the semester, basically writing down what percentage of the assigned reading they had “thoughtfully read” prior to class. This Reading Log was worth approximately 10% of their final grade. For example, if the Reading Log was worth 100 points and the student averaged 80% on completing assigned readings, then he or she would earn 80 points. Although Sappington, Kinsley, and Munsayac (2002) stated that such self-reporting is not a viable method for assessment of reading compliance, student responses (n=72) who were exposed to both the TIERS and the Reading Log (fall of 2009) reveal the following:

- a) The Reading Log by itself encouraged students to read more than they would have without the Reading Log (78.8% Agreed or Strongly Agreed)
- b) The TIERS by themselves encouraged students to read more than they would have without the TIER assignments (70.9% Agreed or Strongly Agreed)
- c) The TIERS by themselves resulted in the students learning more than they would have with the TIER assignments (87.5% Agreed or Strongly Agreed)
- d) Other professors should consider using TIERS in their classes (77.8% Agreed or Strongly Agreed)
- e) Other professors should consider using Reading Logs in their classes (66.7% Agreed or Strongly Agreed)

Conclusions

What should we, as professors, be doing about this problem? We believe the following. First, the problem is significant, and it is contributing to an

increased lack of our effectiveness as educators. Its resolution deserves our best efforts.

Second, to resolve the issue, we should look to the reasons for a lack of student preparation that have been established in the literature of education. These were reviewed early in this paper, but they are reproduced here for continuity’s sake.

1. Lack of student motivation.
2. Lack of student knowledge of effective study habits.
3. Competing demands on student time.
4. Lack of congruency between student objectives for the course and professor objectives for students.
5. Professor behavior.

What this list shows us is that the problem is complex, and, therefore, its resolution will also be complex.

Our empirical research indicated that both the textbook and the professor can impact student willingness to complete assigned readings. Students suggested that a good textbook be reasonably priced (\$50 or less), concise (short chapters), loaded with great graphics, and easy to understand. Business faculty members shared ideas on how they encourage students to prepare for class by completing their assigned textbook reading. The authors divided the responses into one of two general categories: (1) requiring additional student preparation prior to class, or (2) incorporating in-class activities designed to measure the degree of student preparation. One author shared his success with the use of Thoughtful Intellectually Engaging Response (TIERS) and Reading Logs.

However, different students will have different motivations for not reading the assigned text material. Therefore, there is no one solution which we, as professors, can employ that will resolve this issue. Rather, an effective approach will require us to develop course pedagogy that will attack multiple reasons for lack of preparation simultaneously, so that we can reach all students who would otherwise remain unprepared. Until this problem is effectively addressed, we believe professors will continue to experience the frustration they currently feel in motivating their students to complete the assigned reading for class.

As a concluding observation, we would like to express our empathy with the survey respondent who reported the following:

Your question gets to the heart of pedagogy and to the purpose of our industry. To hide from such issues or to ignore them is precisely what we teach our students NOT to do. I hope you get some good ideas from others.

While the concern of this individual is laudatory, the fact that (s)he personally had no “good ideas” to offer is not. Perhaps this paper, and the resulting dialog that may stem from it, will be a first step toward finding a solution. Professional associations and conferences on pedagogy might consider creating Special Interest Groups (SIGs) or roundtables and presentations devoted exclusively to the topic of approaches to engage students in required reading. Since our study was limited to traditional undergraduate students, future research on this topic could involve adult and professional students in a non-traditional setting (both onsite and online).

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Courses that Deliver: Reflecting on Constructivist Critical Pedagogical Approaches to Teaching Online and On-Site Foundations Courses

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This article explores the transition of a foundations of education course from an on-site to an online delivery format. Constructivist and critical pedagogical theoretical work grounds the course content and approach overall, and specific links are made in terms of creating a similar critical environment while using both delivery methods with master's level students. The author describes particular adjustments to course assignments, as well as how students mobilize critical reflection about the course issues and the course itself in retrospect. This comparative look at course delivery methods has implications for creating engaging, flexible learning environments in all foundations-related course environments to nurture the development of reflective practitioners.

Introduction

As online learning continues to surface in higher education institutions in the U.S., it is important to critically reflect on how learning formats, pedagogical approaches and student achievement interact. Teaching dispositions associated with online learning (updating teaching practices, pursuing student engagement) parallel those encouraged among on-site educators (Ash, 2009; Coombs-Richardson, 2007; Kirtman, 2009; Shin & Lee, 2009). Further, using constructivist approaches in online classrooms potentially encourages not only ways for students to learn “norms” of online engagement but also to engage deeply with peers about course topics (McCrorry, Putnam, & Jansen, 2008; Swan Dagen & Ice, 2008).

In this article I will begin by exploring the literature related to critical pedagogy and constructivist teaching approaches, as well as to how these philosophical approaches manifest themselves in teaching online/virtual courses. Next, I will describe the campus-based version of the Critical Issues and Future Trends in Education course, followed by the ways in which I used critical pedagogical and constructivist approaches to transform this campus-based course into an online course. Finally, I will speculate about implications this theoretical framework has for online courses and foundations courses in particular, as well as offer ideas for continuing to develop online courses using these philosophical approaches.

Review of Relevant Literature

In this section, I will begin with a consideration of the literature regarding critical pedagogy and other theoretical grounding for constructivist teaching approaches (Dewey, 1938/1997; Freire, 1970, 2005; Kincheloe, 2005; McLaren, 2007). Then, I will segue into literature reflecting the use of these approaches in online classrooms, both in terms of dispositions and

student engagement (Ash, 2009; Coombs-Richardson, 2007; Kirtman, 2009; Shin & Lee, 2009) and of profound student engagement opportunities in online environments in particular (McCrorry et al., 2008; Swan Dagen & Ice, 2008).

McLaren (2007) explicitly and deeply explores the dialectical qualities of critical pedagogy—a central component to nurturing this approach in the classroom. When education is cultivated in this manner, one views “the school not simply as an arena of indoctrination or socialization or a site of instruction, but also as a cultural terrain that promotes student empowerment and self-transformation” (McLaren, 2007, p. 195). Schooling then becomes an opportunity for teachers and students to *share* power, to *create* meaning together, rather than a static, stagnant place where fragments of finite information are transferred from teacher to student, only to be returned in the packaged form of a test or other assessment.

Democratic classroom interactions comprise another important aspect of critical pedagogy (Kincheloe, 2005). Much in line with McLaren's viewpoints, Kincheloe (2005) links these ideas directly with preservice teachers and the necessity of their raised political awareness in relation to pedagogical practices. He suggests that “the recognition of these political complications of schooling is a first step for critical pedagogy-influenced educators in developing a social activist teacher persona” (Kincheloe, 2005, p. 2). Further, as these “political complications” and other societal aspects are constantly changing, it is necessary that educators who nurture a critical pedagogical stance foster flexibility in their teaching practices—a central theme in using these approaches in online teaching environments—which involves consistently updating their approaches and curricula in response to their students and social environment.

Dewey (1938/1997) links democracy and education through his notions of continuity of experience, principle of interaction, and formation of purposes. As

“[e]very experience is a moving force” (Dewey, 1938/1997, p. 38), the continuity of experience suggests engagement between teachers and students that breeds further engagement, thereby snowballing into experiences that take on lives of their own. Central to this process is the principle of interaction, with each consecutive interface resulting in a dialectical “feedback loop” of generated understanding for both teachers and students. Finally, the components of observation, comparing with previous interactions and evaluation associated with the formation of purposes reflects a complex process wherein students and teachers democratically engage in the educational realm.

Dewey’s concept of “interaction” parallels Freire’s (1970) “dialectical” connections, while Dewey’s notion of analyzing present problems aligns with Freire’s problem-posing education. Critical pedagogical classroom approaches constantly question and potentially (and ideally) disrupt unequal power relationships between dominant and oppressed groups in society. Freire (1970, 2005) grounds his educational interactions in social change, working from the perspectives of oppressed groups on *their* terms, as opposed to presuming those of dominant groups, in order to work toward equitable learning and living conditions.

Two central components of nurturing the concept of “interaction” and “dialectical” relationships in order to consistently work from oppressed perspectives toward social change are students’ and professors’ dispositions and levels of student engagement, both of which greatly impact the success or failure of online courses. Ash (2009) draws from multiple sources (all preK-12 or higher education teachers, or online teacher educators) to establish various qualities associated with effective online instructors. Among these characteristics are an ability to continuously update one’s online teaching practices, the use of multiple technological tools to engage students, a willingness to pursue students who are not engaging with the learning process, and an ability to experience online learning from a student’s perspective (Ash, 2009). Interestingly, all of these attributes are sought after in “brick and mortar” teachers as well.

Coombs-Richardson (2007) explores personal versus impersonal aspects of online environments through data collected from 65 graduate education students (52 female, 13 male). “In order of importance, the participants placed greater importance on observations, discussions, and instructor’s personal touch; and low importance on essays/reports, reading assignments, and exams” (Coombs-Richardson, 2007, p. 73). The author concludes that personalizing the online interaction processes—whether between teacher and students or students and their peers—facilitated positive learning experiences for students.

Kirtman (2009) evaluates the learning outcomes associated with online versus in-class courses. Three online courses (71 students) and three traditional courses (69 students) were compared (127 female and 13 male, overall), and while the online course involved asynchronous instruction through small and large group discussion/activities, e-mailed writing assignments, and PowerPoint slide shows (with audio overlay), the traditional classroom involved small and large group work, discussions, writing assignments, and PowerPoint presentations (Kirtman, 2009). By comparing exam grades, paper grades, and post-course surveys across all six courses, Kirtman found that student outcomes were the same across online and traditional courses, as well as that online interaction is a central concern of students and faculty for promoting students’ academic success.

Shin and Lee (2009) share perceptions of graduate education students in relation to their online learning experiences. The authors suggest that flexibility is a central motivation for students in choosing online course options. They also find divergent opinions in “social” students regretting the lack of face-to-face classroom interaction and more introverted students valuing their opportunity to speak online rather than remaining silent in a traditional classroom. Shin and Lee conclude with a widespread student interest in pursuing hybrid course formats to allow a balance between online and traditional learning environments.

Online courses offer student engagement opportunities that differ from those in on campus courses due to the necessity of technological influences, and these possibilities are a boon for online interactions. McCrory et al., (2008) share research relating to how faculty and students engage, as well as the impact of content matter and types of student assignments in the online environment. Their teaching and research efforts reflect their conscious effort to link constructivist pedagogical approaches with online learning. A majority of the graduate students enrolled in the two courses were practicing teachers (38 out of 46), while some were involved in both online and face-to-face coursework. The authors find that students are more comfortable engaging with mathematical problem-solving tasks, for example, rather than the pedagogical issues associated with a particular “multimedia problem presentation” (McCrory, et al., 2008), as the latter might cause friction among the small group members while they challenge deeply held pedagogical beliefs. They also found that “students engage with and learn what the task, as they interpret it, requires of them” (McCrory, et al., 2008, p. 175), leading to a more focused online discussion of components necessary to complete said task, rather than deeper, more nuanced contextual conversations about

teaching and learning. The authors conclude by calling for explicit and structured approaches to online learning interactions in order for students to establish a comfort level with course “norms” of interaction that allow them to engage deeply in discussions.

Swan Dagen and Ice (2008) investigate how to engage a community of learners in an online reading methods course. The authors track Swan Dagen’s transition from a lack of community in her online courses to one that nurtures a community of learners through the assistance of Ice. Swan Dagen concludes with a much richer and more positive view of online learning as having great potential for nurturing constructivist communities of learners, yet she continues to struggle with both the workload issues (should it be decreased to allow for more collaboration?) and whether or not to continue “forcing” participation via graded rubrics (“bean counting”).

As this review reveals, research related to online learning environments indicates that flexibility, constructivist approaches to teaching and learning, and communities of engagement are all key aspects for producing positive online experiences for both teachers and students. While building my online course, I took into consideration these elements to consciously create a critical pedagogical and constructivist environment with which to pursue dialectical interactions with my students. We will now turn to the details associated with the on campus course goals and design, followed by a reflection on how I transformed this course for online delivery.

Structure and Focus of Critical Issues and Future Trends in Education Course

In the Critical issues and Future Trends in Education course, I encourage students to employ various “theoretical lenses,” i.e., race, social class, gender, self-fulfilling prophecy, to “read” many critical issues in education, i.e. standardized test reform, charter schooling, voucher plans, religion vs. public schooling. They then analyze and synthesize relationships and speculate about how these lenses and issues might impact their future teaching experiences. While there is a weekly writing component involving theoretical analysis of educational issues in an online posting forum, “real time” classroom meetings are primarily focused on facilitating a Freirean (1970, 2005) approach to peer interaction, in that students are encouraged to debate about issues and “make meaning” in relation to frequently difficult theoretical concepts and contentious educational issues. Dewey’s (1938/1997) “formation of purposes” comprise exactly the course goals in terms of linking theory and practice in a dialectical relationship, which is consistently

nurtured through the course assignments and interactions.

This course is meant to provide teacher candidates with a grasp of current educational issues, as well as theoretical approaches to assist in addressing these issues in their future classrooms. An exact description of the course is as follows:

This course is designed to give students an in-depth understanding of contemporary issues and future trends in education. Among the specific issues discussed are educational inequalities, school choice, standardized testing, religion in public schools, school violence, classroom management, and the move toward values, character, or moral education. The course also explores the larger socio-cultural and political-economic contexts of education and schooling. (D’Youville College, 2010a)

As this overview suggests, the themes explored in the course run the gamut of educational issues, exposing students to everything from standardized testing to character education. And, as noted above, theory is an important focus of this course, requiring students to tackle such foundational theorists as Kincheloe, McLaren, Foucault, and Freire.

In order to assist students in what is typically a very difficult transition into theoretical thought and practice, classroom activities are designed to link theory explored in the weekly readings, personal educational experiences, and teaching approaches. Since this course meets only once per week for a little under three hours, these interactions become paramount in terms of addressing misunderstandings and promoting a familiarity with theoretical language and theory-practice connections. Table 1 includes a few examples of activities that are aligned with the related weekly readings. As is evident in the descriptions in Table 1, each activity is meant to magnify the main theoretical points of the readings while at the same time linking them to classroom practices and related issues.

Before teaching the online version of this course, the main student assessments were weekly analytical reflection papers, the group presentation and subsequent reflection paper, and the final self-directed research paper. Weekly writing assignments (type-written papers consisting of 1-2 pages) helped students to individually develop skills writing and eventually *thinking* about educational issues using a “theoretical lens,” as well as linking these analyses to future classroom practices. I provided weekly feedback on these papers, both in terms of the mechanics of writing and student progress in theoretical analysis. In terms of the group

Table 1
Examples of Activities Aligned with the Related Weekly Readings

Week of Course	Course Readings	Activity Descriptions
6	<ul style="list-style-type: none"> A few chapters from Apple's (2006) <i>Educating the "Right" Way</i> 	A forum wherein groups of students take various positions derived from Apple's work (i.e. neoliberals, neoconservatives, authoritarian populists, new professional and managerial middle class, liberal progressives, parents of urban/suburban school students) and debate their varying positions on the use of voucher plans
8	<ul style="list-style-type: none"> Anyon's (1981) <i>Social Class and School Knowledge</i> Mahoney's (1997) <i>The Social Construction of Whiteness</i> Two chapters from Omi and Winant's (1986) <i>Racial Formation in the United States</i> A chapter from Thorne's (1993) <i>Gender Play</i> Davies' (1989) <i>The Discursive Production of the Male/Female Dualism in School Settings</i> 	Students are assigned five different perspectives (Mr. Jones, Mr. Jones, Sr., the female lead, the Egyptian friend, the guards); they then watch the last 5-7 minutes of the movie titled, <i>Indiana Jones and the Last Crusade</i> (1989), work in each of their assigned groups to write what occurred from their character's perspective, and once collected, the professor eliminates the perspectives of those characters who either died, disappeared or occupied positions in oppressed groups
10	<ul style="list-style-type: none"> Foucault's (1977) <i>Panopticism</i> Abu El-Haj's (2005) <i>Global Politics, Dissent and Palestinian-American Identities</i> Delpit's (1995) <i>The Silenced Dialogue</i> The second chapter from Freire's (1970) <i>Pedagogy of the Oppressed</i> 	Students watch a video called <i>The Wave</i> (wherein a high school teacher fabricates a student movement in order to teach his students about dictatorships and their power over indoctrinating processes), after which the professor and students engage in a conversation linking panopticism theory to the video

presentations, while each group presented, their peers engaged in a constructive feedback process, filling out forms that I then scanned and electronically posted on the Blackboard course website. The group presenters then each accessed this feedback and integrated it into the reflection paper which was due the following week and which included the standard weekly theoretical analysis along with a consideration of their presentation experiences, as well as of their peers' and professor's feedback, and all culminating in how they might use this experience/information to improve their future teaching practices. The final paper involved theoretically analyzing a self-directed research topic that, again, links their resulting analysis to their future classroom practices. As with the classroom activities, these various assignments were meant to constantly link theory and practice, pushing students to use analytical approaches to educational issues.

The individual work associated with reading and writing and the group work reflected in the classroom activities culminated in the professor-facilitated student conversations about the readings each week. This most

explicitly exemplifies the facilitation of a Freirean classroom in that I might have some ideas as to possible conversation directions, but the students weigh in, pulling the dialogue in different directions as knowledge creation takes place. The process of continuously "refurbishing" my syllabus also involves my students, in that I open a dialogue with my students to inquire about any specific changes they would recommend in relation to the course. While student evaluations certainly create an opportunity for this kind of reflection, creating space for direct interaction in relation to this "re-visioning" process frequently results in more detailed information, as well as provides students with an example of how they might approach their future students, classrooms, and curricular revisions.

Flipping between Formats: Making Meaning in "Real Time" and Virtual Classrooms

In this section, I will describe and analyze my experiences shifting this foundations course from an on-

site to an online delivery method using constructivist, critical pedagogical approaches, as well as the ways students respond to learning in these two formats. In this course, students in both course formats must now engage in an online forum to grapple with theoretical perspectives and their relationships to classroom practices. However, the on-site course offers weekly opportunities for students to engage in face-to-face conversations (not necessarily tied to the weekly online posting sessions) and activities that encourage building connections between theory and practice (see Appendix A for excerpts from the on-site and online syllabi pertaining to assignment descriptions for comparative purposes).

Alterations of course assignments have necessarily taken place to accommodate not only the online delivery method but also to lead to even more collaborative constructivist teaching and learning opportunities. For instance, in light of the asynchronous online course format, I called into question the challenges of facilitating group presentations, which were a major assignment associated with this course. Instead, I have developed an assignment involving each student using a theory to analyze a particular critical education issue with the help of teacher-oriented and student-oriented resources (such as peer-reviewed articles, children's books, movies, music, websites, lesson plans) to build links to how said student would help his or her future students better understand this theoretically analyzed topic (see Appendix B for an example of a Resource Assignment). At this point, I post each student's assignment in a separate online forum and encourage class peers to provide constructive feedback in relation to each assignment, thereby facilitating critical evaluation and collaboration (at the end of the semester, each student then has a breadth of resources on many topics, as well as constructive criticism for adapting it to different classroom environments). I now also use this assignment in place of group presentations in my on-site course, as students have articulated the value of the interaction and resulting resources associated with the process.

Considering this Resource Assignment is a culminating assignment and requires a great deal of interaction among students, I have eliminated the Final Paper in favor of a short (4-6 pages) Analytical Reflection Paper due during the fifth week of the course, which students then revise to submit during the tenth week of the course. By requiring students to engage in a deep theoretical analysis of a topic using course readings and then having them revise it, I model a critical constructive feedback process, as they must take my ideas into consideration for their revision. Dewey's (1938/1997) principle of interaction is evident most obviously in online/on-site interchanges but also

through professor-student feedback loops facilitated through individual e-mails and assignments (e.g., the Analytical Reflection Papers and Resource Assignment. Just as Dewey (1938/1997) highlights the importance of drawing from local communities and their resources, so too does my Resource Assignment emphasize linking these resources with classrooms to produce progressive, experience-oriented approaches to teaching and learning. The Resource Assignment adds a further level of interaction through the peer-peer assessment process. Engaging in this constructive feedback process then prepares them not only for this aspect of the Resource Assignment but also to mobilize this kind of constructive criticism through their work as future teachers and colleagues.

In terms of online forum interactions, students consistently have linked our online coursework with the theories and readings we explore throughout the semester. During the third week of one recent semester (and second weekly posting session), one student directly links the ideas of transmission-oriented versus production-oriented (or constructivist) learning with our online version of the Critical Issues course in the following excerpt from our online forum:

I certainly believe that transmitting and producing information are intertwined as well. I also agree that this is exactly what this course is intended to do. As you said, we are presented with reading materials and then asked to respond to a question using what we took from the readings. Freire (2005) wrote that the reader gives the text meaning. I believe this is the reason each of us may have a completely different answer to the questions posed each week. This sort of internet group discussion then allows for more ideas to blossom, as we are getting other students' perspectives or takes on the readings. I believe that this is a key component in being able to fully understand a text. If you simply read the text without discussing it with others, it seems to me that you will only be getting one perspective of what the text could mean. In collaborating with others, whole new ideas and meanings can be brought to the forefront. ("Week 3 Discussion Forum," 2010)

As is evident from this online course thread excerpt, this student views the constructivist approach to discussing and analyzing the course readings and topics as resulting in the construction of deeper meanings and multiple perspectives that would not surface had this method not been used. As Dewey (1938/1997) emphasizes, "[u]nless a given experience leads out into a field previously unfamiliar no problems arise, while problems are the stimulus to thinking" (p. 79). By consistently posing problems to students or through

their sharing of problems observed/experienced in classrooms with their peers and me, these become the experiences that feed interactions and lead to developing strategies that might be used to address similar issues in their future classrooms.

Some students experience considerable transformations in terms of their interactions with people in their daily lives and what power they have to effect social change. During the fall 2009 semester, one student, who was a former homemaker and current waitress pursuing her Master's Degree in Education, frequently grounded her reflections in the online forums in links between the course readings and how they were consistently impacting her daily life and interactions. This student reflects on how the course readings for one particular week (week nine, which examined issues associated with sexuality and homophobia) impacted her experiences while speaking with a fellow waitress and high school student as related below, which are worth considering at length:

I had been working with a girl who was rather quiet, who mostly worked without saying anything beyond what was needed. I repeatedly tried to make small talk, but generally had little success. One day, I made some headway with her while inquiring about her plans for college. At first she had said she wasn't sure she was going to go but said she had started to look into it. I jumped on the opportunity to find out why she felt this way, encouraging her to seek any kind of postsecondary education. During the conversation, however, I discovered that many of her reasons for her lack of confidence and withdrawal had to do with the fact that she was gay. When she told me, I said "Oh, I didn't know that, so the girlfriend you made mention to is your significant other? - Where did you meet her?" That opened a flood gate of stories and emotions.

She recounted how she had spent her freshmen year of high school in therapy with the help of anti-depressants. She said she didn't have any friends at school and that she ate lunch everyday by herself. She went on to say that although she gets called names everyday [sic] by other students and she still sits by herself in the lunch room, she is doing a lot better than a couple of years ago. At this point I had a difficult time not crying from the pain that I felt emanating from her, even recalling the conversation brings up feelings of sadness for her and anger at the school district for not addressing the issue. The school has chosen to look the other way creating a system of oppression and injustice for this student and others like her. When she left that night, she came over to me and said "Thank you." I said, "You don't need to thank me for

treating you like the human being that you are." She told me that she thought it was awfully nice of me to treat her nicely, especially since she thought I was "all religious." I laughed and told her that if she wanted to think of me that way - then she should think of herself as a way God will teach others lessons of compassion and acceptance through.

I left that night feeling helpless, as though I had no way to stop the "violence" against this girl. After reading the articles from this week, however, I realize that none of us are helpless. I am going to speak with the Superintendent, who generally makes himself available to parents in the district, about the need to address the homophobia that is exerted at all levels of the school district. ("Week 9 Discussion Forum," 2009)

This student is clearly exceptional in terms of her persistence in pursuing this high school student's academic success, but it is clear that the course readings and online interactions have challenged her in terms of believing that she can do more than be a shoulder to cry on. Interestingly, another student in the course—on behalf of the majority of the other students, who were part of one of the on-site cohorts—asked me if I was actually this student, using her name as a pseudonym and providing a venue to show "theory in action." The fact that this querying student and her peers attempted to "call me out" shows how very compelling and seemingly unbelievable this other student's reflections had been and that these reflections became an example for her peers to use as a model of how to take action using the course theories in their daily lives.

Another student sent an e-mail regarding the high points of a six-week version of this course held during a summer semester, after the course was completed and final grades were posted:

I found your criticisms fair and encouraging; and allowed me to look more deeply into the topic at hand. Also, I loved the peer feedback, and discussion. This was one of the best parts of the course, and much better, in terms of feeling like a class community, than other online classes I have taken. I found myself compelled to keep checking moodle [sic], to see where the dialogue was going! (Personal communication, August 8, 2010)

This student highlights the importance of "feeling like a class community" through the online discussions and peer assessment processes, noting that she felt "compelled to keep checking" in on the online dialogue in which she was consistently engaged. "The control is social, but individuals are parts of a community, not outside of it" (Dewey, 1938/1997, p. 54). Both

professor and students interact in online and on campus discussions and activities, with the professor mediating as a facilitator of each community experience.

Course evaluation tools provide a window into how successful this “professor as facilitator” approach is for students, as they enable students to offer critiques of the course processes and professors without fear of course grade-related repercussions (completed evaluations are made available to professors only after final course grades have been submitted). The Student Satisfaction Survey (D’Youville College, 2010b), an online version of the course evaluation tool, provides a broad perspective from students as they look back on the entire course experience. On one online course evaluation, a student reflected on linkages between content and methods used in the course:

[The professor] offered an incredible class which examined issues at depth emphasizing the synthesis of the information presented. [The professor] was an excellent facilitator who encouraged critical analysis of information. This particular class actually helped me to more fully grasp the information presented in the philosophical foundations class I took this semester; it has shaped my perspective and philosophy to a considerable extent. (*Student Satisfaction Survey*, 2010)

As Dewey (1938/1997) suggests, “[w]hen education is based upon experience and educative experience is seen to be a social process, the situation changes radically. The teacher loses the position of external boss or dictator but takes on that of leader of group activities” (p. 59). Not only does this student highlight my position as a facilitator throughout course interactions, but this student also notes the broader impact on understanding other courses and shaping teaching philosophies.

Concluding Reflections, Implications and Ideas for Future Engagement

These reflections about teaching a foundations of education online and on-site course imply the importance of both engagement on the part of professors and students *and* flexibility in terms of ongoing curricular development in light of ongoing technological changes. Through the use of online forums, in particular, I have not only maintained a continuous link with my students as they struggle with course material but also helped them apply theories learned during these interactions to their teaching and learning experiences. Further, by approaching course delivery as a tool and courses as “works in progress,” I have modeled a flexible teaching approach that allows students to make suggestions for improving the course, both during and after these interactions, and to

comfortably use the spaces provided to “practice” analysis, not only of their current and possible future educational experiences, but also pertinent everyday interactions, as well.

This work has implications for how foundations of education courses are taught, as well as the philosophical underpinnings of any course interactions in general. For instance, if Freire’s (1970) banking concept of education approach results in reduced engagement in classrooms on campus, what will the same approach elicit from students in an online course environment? Critical pedagogues like Freire, Kincheloe (2005), McLaren (2007), and Dewey (1938/1997) articulate the importance of foundational teaching philosophies, essentially highlighting those crucial aspects of student-teacher interactions and dispositions that Ash (2009), Coombs-Richardson (2007), Kirtman (2009), and Shin and Lee (2009) find are indeed central to the success or failure of online learning environments. Further, McCrory et al. (2008) and Swan Dagen and Ice (2008) explore the importance of nurturing student engagement, both with their peers and professors, in online environments, which supports Freire’s (1970) concept of “dialectical” relationships and Dewey’s (1938/1997) notion of “interaction.” Simply put, those educators who mobilize critical teaching philosophies have been nurturing students in classrooms on campus for years in the same productive ways that are supported by these researchers of successful online courses.

As we continue developing online and hybrid approaches to course delivery, it is of central importance to also examine what we have done and are doing in on-site courses and facilitate a dialogue of sorts between online and “offline” teaching and learning realities. In terms of future research, professors might not only continue mining and building from students’ feedback but also involve students in the development of foundations of education courses. This form of feedback might impact individual classroom meetings or assignments, or perhaps lead to the co-construction of all course processes. In this way, these “dialectical” interchanges, according to Freire, or “interactions” with each other and our environments, as Dewey would say, fuel constant changes of all course delivery methods, which in themselves constitute constructivist, critical pedagogical approaches to teaching and learning.

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Appendix A

Assignment Descriptions from the On-site Syllabus for “Critical Issues and Future Trends in Education”

Specific Requirements:**Attendance and Participation (20%)**

The rigorous seminar format of this course requires that you attend each classroom session in a timely fashion. Missing classes, coming late, and leaving early will effectively work to lower your course grade, and the grade deduction will be dependent upon the circumstances of your absences. **If you miss more than 5 classes, then you will fail this course.** A total of 5% of this part of your grade will depend on your professional comportment. As professional educators, you will be expected to treat your coworkers and students with respect for their diverse backgrounds and ideas. As such, throughout this course, you should emanate said behavior with your fellow classmates and your instructor during all interactions (i.e. classroom conversations, group presentations, meetings with the instructor). Finally, while this course is predominantly comprised of seminar-related activity (i.e. large- and small-group debate), side conversations are prohibited during the class session.

An additional 5% of your participation grade will depend on your weekly use of the Blackboard forum. The instructor will pose an initial question to which every student is expected to respond. Students are encouraged to respond to each other, engaging in conversations about the overarching question and related themes, and the instructor will draw pertinent points or resultant questions from these interactions each week to add to in-class conversations.

Group Presentation (30%)

Each student will work collaboratively with another 2 or 3 students to give a 1.5-hour presentation on one of the critical issues we cover in the course. Using the assigned readings as a starting point, you are required to conduct additional scholarly research on the topic, prepare discussion questions, and organize activities to lead the whole class to learn. Activities such as role-play, debate, guest speakers, video show, etc. are recommended. Each student presenter will then write a reflection paper (3-4 pages in length, typed, double-spaced) due via e-mail to the instructor (**before** the classroom meeting) on the week following their presentation, in which they will use a theoretical lens to analyze presented readings’ issues (as in the weekly analytical reflection papers), reflect on issues raised during the presentation, as well as reflect on issues related to the experience presenting as a whole. Your performance for the presentation will be evaluated by both your fellow students in class and your instructor. The outline found at the end of this syllabus provides an overview of the elements to include in your presentation, and copies of this outline will be distributed to students before each presentation to facilitate the feedback process. This feedback will be collected after each presentation, and the instructor will scan it onto Blackboard for the presentation group to use in their reflection papers due the following week.

Weekly Analytical Reflection Papers (20%)

In addition to the component associated with the group presentation and classroom participation, communication through strong, well-grounded writing is another crucial aspect of this course. For each classroom meeting, you will write a reflection paper (1-2 pages, typed, double-spaced) in which you analyze critical characteristics of the readings. **You will e-mail your paper to the instructor each week before the related classroom meeting.** These papers are **not** a place for merely summarizing the texts, but they are meant to be an opportunity for you to synthesize the ideas introduced. Further, you may reflect on your personal educational experiences, but you **must** ground these reflections and observations in the theories discussed in the readings. For instance, while reading about the issue of cultural capital, you may describe how your particular social position has prepared you with cultural capital to succeed in particular social situations and not others. These papers are weekly “practice” for your final papers, so you will be using theories to analyze various critical issues in education, as well as to speculate about ways particular issues may play out in and/or influence your future classrooms when you are teaching. The instructor will provide feedback and grading (4 points/paper) each week to assist in developing your writing and analytical skills.

Your writing should be academic in nature, and you should ensure that all sources are cited properly and referenced in a bibliography in the end of the paper. APA is the required writing style for all papers.

Final Paper (30%)

The topics introduced during this course are not only broad, but they are also by no means exhaustive in terms of critical issues in education. Since they only skim the surface of possibilities, you will select a topic of interest—either delving deeper into one of the weekly topics or selecting one not covered by the course—and write a 6-10-page research paper (typed, double-spaced) exploring this issue in relation to broader educational forces, as well as those occurring at the classroom-level. This paper will diverge from the form of a literature review, for you will gather **at least 4 scholarly references beyond the course readings** and analyze main themes raised therein using **at least 1 critical theoretical lens** discussed during this course, analyzing your topic and speculating about it in relation to education. For instance, you may be interested in how student-teacher relationships affect math achievement in high school classrooms. You could use the lens of gender (achievement in boys versus girls) or that of the self-fulfilling prophecy (teacher perceptions influencing student achievement) to better understand and analyze the literature you find for your research paper. As with the reflection papers, you may draw from your personal educational experiences, however these should remain largely at the level of impetus (i.e. when describing your motivations for selecting the topic during your introduction) and/or conclusions (i.e. how you plan to integrate these ideas into your future classrooms). The 6-10 pages will **not** include the title page or reference section. The rules in relation to writing style outlined in the “Weekly Analytical Reflection Papers” section above also apply to the final paper. **All final papers are due no later than 12pm (noon) on Wednesday, April 29th via e-mail to the instructor.**

Class Schedule

<i>Week</i>	<i>Date</i>	<i>Assignment/Activity</i>
Week #1	1/14	Introduction—Review of Syllabus and Viewing of <i>The Ron Clark Story</i>
Week #2	1/21	Educational Inequalities—Kozol (pp 1-31); Freire (1 st and 9 th letters, pp 31-47, 135-54); McLaren (pp 194-223) (T= 95 pages) <i>Recommended reading:</i> Kozol (1991)
Week #3	1/28	Educational Inequalities cont’d—Chomsky (pp 15-36); Freire (2 nd letter, pp 49-59); Kincheloe (Chapter 1, pp 1-43) (T=74 pages) <i>Recommended reading:</i> Kozol (1991) Viewing of <i>Children in America’s schools</i>
Week #4	2/4	Standardized Testing and Ability Grouping— <i>NCLB</i> website document (4 pgs); Meier and Wood (all chapters) (T=123 pages) Viewing of <i>Paper Clips</i>
Week #5	2/11	Standardized Testing and Ability Grouping— Gardner (pp 5-48); Natriello (pp 1-13); Yonezawa and Stuart Wells (pp 47-62) (T=71 pages) <i>Recommended reading:</i> Rist (pp 411-451) Group Presentation 1
Week #6	2/18	1-page Final Paper Outline and References Due School Choice, “America” and Moral Education—Apple (Chapters 1 and 2, pp 1-52)

		(T= 52 pages) <i>Recommended reading:</i> Apple (2006), Chapters 3 and 5
Week #7	2/25	School Choice, “America” and Moral Education—Apple (Chapter 7, pp 185-201); Noddings (pp 215-230) (T= 31 pages) <i>Recommended reading:</i> Hochschild (1995), Pak (2002) Group Presentation 2
Week #8	3/4	Social Issues in Education— Anyon (pp 3-42); Mahoney (3 pages); Omi and Winant (pp 1-23); Thorne (1-10); Davies (pp 229-241) (T=87 pages)
Week #9	3/11	Social Issues in Education—Horvat and Antonio (pp 317-42); Weis (pp 111-132); Rofes (8 pages); Johnston (6 pages) (T= 61 pages) <i>Recommended reading:</i> Friend (1993) Group Presentation 3
Week #10	3/18	School Violence, Surveillance and Issues of Power—Foucault (pp 195-209); Abu El Haj (pp 199-215); Delpit (pp 21-47); Kozol (pp 62-87); Freire (Chapter 2, pp 71-86) (T= 79 pages) <i>Recommended reading:</i> Freire (1970), Chapter 1 (pp 43-69) Viewing of <i>The Wave</i>
Week #11	3/25	<i>No class meeting—Spring Break</i>
Week #12	4/1	School Violence, Surveillance and Issues of Power—Apple (pp 1760-1772); Giroux (pp xiii-xxii); Abu El Haj (pp 199-215) (T= 36 pages) <i>Recommended reading:</i> Freire (1970), Chapter 3 (pp 87-124), Chapter 4 (pp 125-83) Group Presentation 4 Viewing of <i>The Merchants of Cool</i>
Week #13	4/8	Media, Culture and Technology—Miller (pp 1-16); Bodroghkozy (pp 566-89); Dolby (pp 63-77); Mashburn and Weaver (pp 559-66); Sensoy (pp 593-602) (T= 70 pages) <i>Recommended reading:</i> Noble (1996), Alvermann and Heron (2001), Dimitriadis (2001) Group Presentation 5 Viewing of <i>The Future We Will Create</i>
Week #14	4/15	<i>No class meeting—AERA Conference</i> Weekly Reflection due for following readings before 4/22 class meeting:

		Media, Culture and Technology— Storey (pp 1-20); MacKenzie and Wajcman (pp 3-27); Bromley (6 pages); Steinberg (pp 207-218); Kincheloe (pp 249-266) (T= 78 pages) <i>Recommended reading:</i> Valentine and Holloway (2002), Jenkins (2000)
Week #15	4/22	Reframing Critical Issues in Education—Come to class having viewed <i>Blackboard Jungle, Dangerous Minds, and Lean On Me</i>
Week #16	4/29	<u>FINAL PAPERS DUE BY 12PM (NOON) VIA E-MAIL!!</u>

Assignment descriptions from online syllabus for “Critical Issues and Future Trends in Education”:

Specific Requirements:

Online Forum Participation (40 pts)

The rigorous seminar format of this course requires that you “attend” each weekly online forum threaded conversation in a timely fashion. The instructor will post each of the weekly queries on the Moodle forum on the Saturday before the Tuesday deadline—students will then have until the following Saturday (by midnight) to interact with the instructor and their peers in relation to this weekly query. While it is expected that students will continuously respond to/initiate chat threads throughout the week, **all initial responses to the instructor’s weekly posting must be submitted by 8pm on the Tuesday of that week’s reading.** The twelve initial posting due dates are 8/31, 9/7, 9/14, 9/21, 9/28, 10/5, 10/12, 10/19, 10/26, 11/2, 11/9, 11/16, with the November 30th through December 7th posting session focusing exclusively on the Resource Assignment (described in the related section below). For instance, as indicated in the “Course Schedule” below, once a student completes the first set of readings for “Week #1,” s/he will post a response to the posted query relating to those readings by 8pm on Tuesday, August 31st. This student will then continue posting through Saturday, September 4th (at which point the instructor will post the next query). While the initial posting is worth 1-2 points, each additional posting is worth .5 of a point, for a weekly maximum of 4 points. **Please note: As there are 12 weeks of posting sessions (at a maximum of 4 points each) but 40 points total for this aspect of the course assignments, students may choose either to skip two weekly posting sessions or post initial/response postings for two weeks for points that will be added to their final course grade.**

Part of your grade will depend on your professional comportment. As professional educators, you will be expected to treat your coworkers and students with respect for their diverse backgrounds and ideas. As such, throughout this course, you should emanate said behavior with your fellow classmates and your instructor during all interactions (i.e. online conversations, peer/instructor e-mail interactions, real time/virtual meetings with the instructor).

Analytical Reflection Papers (30 pts)

Communication through strong, well-grounded writing is another crucial aspect of this course. You will write one reflection paper (4-6 pages, typed, double-spaced) and then revise it; the first is due on 9/21 and the revision is due on 10/26 (both Tuesday 8pm deadlines). **You will e-mail your paper to the instructor by each 8pm Tuesday night deadline.** You will be analyzing critical characteristics of the readings using a selected theory, and your analysis should involve **at least 4** course readings.

These papers are **not** a place for merely summarizing the texts, but they are meant to be an opportunity for you to synthesize the ideas introduced. Further, you may reflect on your personal educational experiences, but you **must** ground these reflections and observations in the theories discussed in the readings. For instance, while reading about the issue of cultural capital, you may describe how your particular social position has prepared you with cultural capital to succeed in particular social situations and not others. Writing and revising your paper is meant to provide a “practice” opportunity for completing the theoretical analysis of your resource for your Resource Assignment, so you will be using theories to analyze various critical issues in education, as well as to speculate about ways

particular issues may play out in and/or influence your future classrooms when you are teaching. The instructor will provide feedback and grading (a maximum of 10 points for the initial submission and 20 points for your revision) to assist in developing your writing and analytical skills. Late papers will not be accepted unless documentation of serious illness or crisis is provided. **As the analytical reflection papers are benchmark performances of the course, failure to submit completed papers on time (or at an alternative time negotiated with and approved by the instructor) will result in failure of this course.**

Your writing should be academic in nature, and you should ensure that all sources are cited properly and referenced in a bibliography in the end of the paper. The 6th edition of American Psychological Association (APA) is the required writing style for all papers and details are found online at <http://www.apastyle.org/pubmanual.html>.

Resource Location, Sharing and Assessment Assignment (30 pts)

In addition to the components associated with the forum participation and analytical papers, each student will select a topic, gather **at least 6** resources related to this topic and then use one theory to analyze how these resources might expose connections relating to this topic when used with future students. As I have provided many recommended readings and viewings, you may choose to use **no more than 2** of these recommended course readings as two of your teacher-oriented resources for this assignment. Resources may include websites and other Internet sources, books, movies, music—any kind of multimedia that might help future students better grasp, analyze, and evaluate (think of Bloom’s taxonomy here) the selected topic. You may also gather resources that inform your teaching approaches only, your classroom interactions only, or a mixture of both. **At least 3 of your selected resources must be for direct use with your future students.** Each student will then write an analytical reflection paper (2-4 pages in length, typed, double-spaced) wherein the selected theory will be used to analyze how each of the **at least 6** resources highlights important aspects of the topic (and look to your analytical paper structure to assist you here).

For instance, a student might choose standardized testing practices in a 3rd-grade classroom as the topic with social class as the theory. After locating two websites (perhaps outlining lesson plans or activities to be used with the 3rd-grade students), a book (at the 3rd-grade reading level that might be used with the 3rd-grade students), a DVD (to be viewed with the 3rd-grade students), a song (two be considered by the 3rd-grade students), the recommended *A Class Divided* documentary and Rist reading from Week #2, the student then writes the 2 to 4 pages in which s/he analyzes how these resources expose connections between social class and testing practices, as well as how these ideas will surface through using the resources with the 3rd-grade students. As is evident by this example, selecting a grade level, age level or particular student group/school environment will help focus the process of locating resources, as well as completing the accompanying paper.

Each student will then send the resources/descriptions and paper to the instructor (by 8pm Tuesday 11/30), who will then post each submission on the Moodle forum for peer consideration and assessment. Every student will then perform a brief “Resource Assessment” of each student’s resource list and accompanying analysis. The instructor has posted a copy of the “Resource Assessment” under “Course Information” on Moodle. Please refer to the “Course Rubrics” under “Course Documents” for specific details about quality and quantity of postings for successful completion of this assignment.

Class Schedule

<i>Week</i>	<i>Date</i>	<i>Assignment/Activity</i>
Week #1	8/22	Review of Syllabus—Please direct any questions to instructor via chat or e-mail/telephone (contact information located on page 1 above)
Week #2	8/29	Educational Inequalities—Kozol (pp 1-31); Freire (1 st and 9 th letters, pp 31-47, 135-54); McLaren (pp 194-223) (T= 95 pages) <i>Recommended reading/viewing:</i> Kozol (1991), “Week 2, Theoretical Terms” PowerPoint, “EDU 653, Contextual Activity Description”

Week #3	9/5	Educational Inequalities cont'd—Chomsky (pp 15-36); Freire (2 nd letter, pp 49-59); Kincheloe (Chapter 1, pp 1-43) (T=74 pages) <i>Recommended reading/viewing:</i> Kozol (1991), “Week 3, Theoretical Overview II” PowerPoint, <i>Children in America’s schools</i> , “EDU 653, Kozol Group Conversations” PowerPoint
Week #4	9/12	Standardized Testing and Ability Grouping—NCLB website document (4 pgs); Meier and Wood (all chapters) (T=123 pages) <i>Recommended reading/viewing:</i> <i>Paper Clips</i> , “Week 4, NCLB Definitions” PowerPoint
Week #5	9/19	Analytical Reflection #1 Due by 8pm Tuesday 9/21 Standardized Testing and Ability Grouping— Gardner (pp 5-48); Natriello (pp 1-13); Yonezawa and Stuart Wells (pp 47-62) (T=71 pages) <i>Recommended reading/viewing:</i> Rist (pp 411-451), “Week 5, Alternatives to NCLB” PowerPoint
Week #6	9/26	School Choice, “America” and Moral Education—Apple (Chapters 1 and 2, pp 1-52) (T= 52 pages) <i>Recommended reading/viewing:</i> Apple (2006), Chapters 3 and 5, “Week 6, School Choice I” PowerPoint, “EDU 653, Forum Activity” PowerPoint
Week #7	10/3	School Choice, “America” and Moral Education—Apple (Chapter 7, pp 185-201); Noddings (pp 215-230) (T= 31 pages) <i>Recommended reading/viewing:</i> Hochschild (1995), Pak (2002), “Week 7, School Choice II” PowerPoint, “EDU 653, ‘I am from’ Poetry Activity” PowerPoint
Week #8	10/10	Social Issues in Education— Anyon (pp 3-42); Mahoney (3 pages); Omi and Winant (pp 1-23); Thorne (1-10); Davies (pp 229-241) (T=87 pages) <i>Recommended reading/viewing:</i> “Week 8, Social Issues I” PowerPoint
Week #9	10/17	Social Issues in Education—Horvat and Antonio (pp 317-42); Weis (pp 111-132); Rofes (8 pages); Johnston (6 pages) (T= 61 pages) <i>Recommended reading/viewing:</i> Friend (1993), “Week 9, Social Issues II” PowerPoint, <i>It’s Elementary</i> , “EDU 653, Role Playing Activity Linked with ‘It’s Elementary’” PowerPoint
Week #10	10/24	Analytical Reflection #2 Due by 8pm Tuesday 10/26 School Violence, Surveillance and Issues of Power—Foucault (pp 195-209); Abu El Haj (pp 199-215); Delpit (pp 21-47); Kozol (pp 62-87); Freire (Chapter 2, pp 71-86) (T= 79 pages) <i>Recommended reading/viewing:</i> Freire (1970), Chapter 1 (pp 43-69), “Week 10, School Violence, Surveillance and Power” PowerPoint, <i>The Wave</i> , “EDU 653, ‘The Wave’ Group Discussion Question” PowerPoint
Week #11	10/31	School Violence, Surveillance and Issues of Power—Apple (pp 1760-1772); Giroux (pp xiii-xxii); Abu El Haj (pp 199-215) (T= 36 pages) <i>Recommended reading/viewing:</i>

		Freire (1970), Chapter 3 (pp 87-124), Chapter 4 (pp 125-83), “Week 11, School Violence, Surveillance and Power, Take Two” PowerPoint
Week #12	11/7	Media, Culture and Technology— Storey (pp 1-20); MacKenzie and Wajcman (pp 3-27); Bromley (6 pages); Steinberg (pp 207-218); Kincheloe (pp 249-266) (T= 78 pages) <i>Recommended reading:</i> Valentine and Holloway (2002), Jenkins (2000), “Week 12, Media, Culture and Technology” PowerPoint, <i>The Merchants of Cool</i>
Week #13	11/14	Media, Culture and Technology—Miller (pp 1-16); Bodroghkozy (pp 566-89); Dolby (pp 63-77); Mashburn and Weaver (pp 559-66); Sensoy (pp 593-602) (T= 70 pages) <i>Recommended reading/viewing:</i> Noble (1996), Alvermann and Heron (2001), Dimitriadis (2001), <i>The Future We Will Create</i>
Week #14	11/21	<i>Thanksgiving Break—No Assignments Due</i>
Week #15	11/28	Resource Assignments due by 8pm 11/30—begin assessing peers’ assignments via individual Moodle forums
#16	12/5	Resource assessment continues through 8pm 12/7

Appendix B
Resource Assignment Example

In our third grade classrooms we will be faced with children of varying abilities from different cultures and family backgrounds. We are prepared to navigate our way through these issues, but what will we do when faced with negative attitudes and beliefs which are shaped at home? Incessant name calling and teasing can no longer be viewed as “kids being kids.” Where do these ideas and words come from? Most often they will be heard and learned in the home environment. We cannot change the home environment but we can have an effect on students’ self-perceptions. The self-fulfilling prophecy is a powerful force, one that can often be negative. At home, if boys are called wimps or sissies by their fathers or other male role models they may often portray a violent or aggressive image because they don’t want to be called such names. Girls may be called tomboys because they are more interested in technology than cooking. We must tear down the gender specific stereotypes children are having created for them by others. We must empower students to be confident in their abilities and feelings.

In dePaola’s (1979) book *Oliver Button is a Sissy* we meet young Oliver who doesn’t like to do the same things the other boys do. His father insists, “Oliver, don’t be such a sissy! Go out and play baseball or football or basketball. Any kind of ball!” (p. 8). Oliver is faced with public displays of humiliation which are common in schools. Books like this are useful when trying to teach students that they need to believe in themselves in a positive way, regardless of what is said to them. In the end, Oliver persists with his dancing and is accepted as a star because he created and retained a positive self-image. The movie *Billy Elliott* (Brenman and Finn, Producers, Daldry, Director, 2000) gives students a text to world connection regarding a positive self-fulfilling prophecy. Billy’s father is less than supportive of his decision to join the ballet, wanting him instead to partake in the masculine sport of boxing. However, Billy follows his dream to dance in the ballet; he follows and achieves his dream in spite of the masculine male roles which surround him.

The male characters in both *Oliver Button* and *Billy Elliott* have been portrayed as having feminine characteristics. Hutchinson’s (1995) article contains quotes overheard in a physical education class and a poem by Griffin (1993) which show how students’ actions are related to the self-fulfilling prophecy. How you act in situations has an effect as to how people treat you. If you don’t believe that you can catch the fly ball, people will sense your lack of self-confidence and likely not pick you for their team or even publicly call you names. Use of this poem would allow students to feel the true weight and impact that phrases have on a negative self-fulfilling prophecy. The video linked to Thompson’s (2009) PBS webpage *The Search for Masculinity* suggests that football holds the traditional view of masculinity. The football coaches in the video encourage their players to “play tough” and “smash people.” Students may not realize what is happening while engaged in the situation; this video will allow them to see it from the outside.

So how do we change these perceptions and have students work toward a positive self-image which will help them work toward a positive self-fulfilling prophecy? The *Women in World History Curriculum* (2009, <http://www.womeninworldhistory.com>) website provides many lesson plans which detail the accomplishments and contributions of women throughout world history. These lessons will allow the boys to see that women are just as capable as men in contributing to the development of the world. These lessons will also empower girls to see that there have been women before them who have positively contributed to and impacted the history of the world.

We cannot be with our students twenty four hours a day. They will certainly come to school with attitudes and beliefs regarding gender stereotypes which have been formed at home. Using the resources provided we can empower children to believe that we all have something to contribute and that we must have a positive self-image regardless of what others say and do. Together, if we believe in positive change, we can create it within our students.