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Table of Contents

Articles

Art as Reflection/Art as Reflective: Service-learning, Preservice Teachers, and the Uses of the Aesthetic
Deborah Biss Keller, Ph.D. and Robert J. Helfenbein, Ph.D.

Collaborative Testing, Gender, Learning Styles, and Test Performance
William Breedlove, Tracy Burkett, and Idee Winfield

Using Focus Groups for Student Evaluation of Teaching
Eric M. Fife, Ph.D.

The Effects of a Classroom Discussion Technique on Student Satisfaction: A Quasi-Experiment
Leda Nath and Lawrence Anderson

Mining Our Experiences: Reflecting on the Subtle Interpersonal Dimension of Teaching and Learning
William B. Strean and Bob Henderson

Student Perceptions of the Integration of Early Clinical Experiences and Coursework: A Pilot Investigation
Debra L. Shelden, Mary O'Brian, and Kelli S. Appel

Art as Reflection/Art as Reflective: Service-learning, Preservice Teachers, and the Uses of the Aesthetic

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Abstract

This qualitative study examines first-year college students' perceptions, expressed through artwork, of service-learning experiences in urban schools and community centers. The notion of art as means to acquire a broader, more unifying understanding of lived experience—informed by Pateman, Eisner, Dewey, and Greene—provided the working framework within which the authors analyzed students' artwork and accompanying explanatory essays. The authors argue that the aesthetic as an alternative form of assessment in service-learning offers the possibility of exploring art as reflection of students' perceptions of those served and as reflective of service-learning experiences in the greater social, political, and economic context.

While written and oral reflections are typical and integral components to service-learning at the post-secondary level, there is a lack of documented work on the use of art as both a means by which students reflect their perceptions of those with whom they work in their service-learning experiences, and a way for students to reflectively consider their experiences in light of the greater societal forces at work in the lives of those served. There is ample literature regarding reflection in general (here we use the term *reflection* as more all-encompassing than our definition of *art as reflection*) as an integral component of service-learning. Hatcher and Bringle (1997) noted that students' reflections on their service-learning activities facilitate the potential for students to reconsider assumptions, establish new frameworks, and create perceptions that impact future action. Reflection, they noted, affords students an opportunity to relate their service-learning experiences to the curriculum and to connect the concrete with the abstract. Weisskirch (2003) noted the particular importance of employing reflection with service-learning due to the extent to which the service-learning experience itself plays a role in the acquisition of information. He also highlighted the possibility of students learning things that are unintended but that are personally meaningful, and how such learning is fostered by reflection. Weisskirch stressed the significance of self-reflection as students contemplate the impact of their service-learning experiences on their personal identities and their career goals. Critical reflection is a distinguishing factor of service-learning and other types of experiential education, such as practica, internships, and traditional volunteer programs (The American Association of Community Colleges, 1995; Bringle & Hatcher, 1996; Buchanan, Baldwin, & Rudisill, 2002). Reflection assignments for students engaging in service-learning projects typically take the form of class discussions, readings, and written journals with directed and non-directed questions. Some authors have offered suggestions of other modes of reflection, such as individual/group projects, writing portfolios, in-class presentations (The American Association of Community Colleges, 1995), ethical case studies, research papers, personal narratives, poetry, mural paintings, stories, and service-learning portfolios that can include photo and written essays (Hatcher & Bringle, 1997). The visual arts, however, are not typically offered as a means for students to reflect on their service-learning experiences. When employing art as a medium for reflective self-expression, though, the opportunities are endless. This paper is an account of how freshmen college students represented their lived experiences with service-learning through art.

Context of the Study

This study represents the beginning efforts of a large Midwestern School of Education to document the programmatic commitments to civically engaged learning and scholarship embraced by the larger university administration and local faculty. While service-learning as a pedagogical method is often the sole component of civic engagement, the unit in which this study takes place sees much greater potential in the educative possibilities in intentional reflection as a way of marking personal growth. For a school of Education, both a responsibility to the larger society and to reflection are key characteristics of the day-to-day work; but, it could be argued that an extended conversation between those interested in the civic mission of higher education and scholars of education proper might prove beneficial.

Community service-learning is commonly defined as “a method of teaching that promotes caring, contributing citizens; makes abstract knowledge relevant; engages the community in teaching; and effects real community change” (Bartsch & Barnicle, 1997, p.1; see also O’Connell, 1999). Schools of Education recognize all of the former attributes as shared goals but are only slowly embracing these methods in the work of preservice teacher education. This study not only highlights one institution’s efforts at providing a service-learning experience to preservice teachers, but also hopes to reflect commitments to alternative forms of assessment from the field of education’s expertise to broaden the conversation of civically engaged education.

Methods

Twenty-five females and seven males participated in this qualitative study. Participants were students enrolled in an elective introductory education course and required to complete 12 hours of service-learning in urban community centers or the supplemental programs of urban schools. Participants tutored students of various age levels in homeless shelters and at a number of school and community center sites. Some of the sites serve a largely Latino/a population, others serve mostly African Americans, and still others serve a more diverse population including Latinos/as, African Americans, and Caucasians.

Since most of the participants were from surrounding suburbs and not the urban core where the service-learning took place, many entered the course with little exposure to racial and ethnic diversity. As they worked closely with children in urban settings in the service-learning experience, students developed

a sense of empathy for those less fortunate than they, and many of their stereotypes and preconceived notions about homeless and urban children were dispelled. They struggled with the complexities around the educational issues of race and class and provided valuable perspectives on the continuing study of the teaching of teachers. While recognizing the context of philosophical orientation inherent in simply beginning this (or any) line of inquiry (Goetz & LeCompte, 1984), this paper explores the words and artistic representations of the preservice teachers themselves, privileging their voices as they struggle with their own perspectives of urban education and self as teacher. Toward this end, written narratives describing the development of their projects supplement observations and analysis of the projects themselves. As much as possible, the authors do not judge these future educators; but rather report and reflect on the intellectual and ethical processes these preservice teachers experienced in dealing with new experiences in the context of their service-learning interactions.

As part of the course requirements, students were required to write reflections on their service-learning experiences, addressing directed questions regarding attitudes about diversity, civic engagement, and teaching as a career option. Students were also required to individually create art projects that reflected their experiences and personal growth during their participation in service-learning. In addition, students were to write a summary explicating their artwork. As a capstone for the course, the final art project provided a culminating representation of their service-learning experience and afforded students both an opportunity for multi-sensory expression and a potential framework for integrating art into the curriculum as prospective teachers. Students presented their art projects to the School of Education and faculty from other schools and university departments in a forum setting that allowed for a further reflection on their experience and how it impacted their thoughts on urban education and on themselves as teachers. The art project itself and the students' reflections on their representations provide the data for this study. Although not embracing the full method of action research, the experience of talking about and reflecting on their practice hopefully proved beneficial to the teachers themselves (Rogers, Noblit & Ferrell, 1999).

Theoretical Framework

Pateman (1991) asserted that through “aesthetic intelligence” (p. 8)—a form of intelligence informed by the feelings and the senses—we are able to grasp a broad range of meaning and values integral to “any full concept of human existence” (p. 8). He further maintained that comprehension of the aesthetic mode is as crucial as the discursive mode; and it is the aesthetic mode through which the arts operate. Pateman called for a place for the arts in every student’s education, due to the ability of the arts to reach “the very core of human existence, having the potential to deal with every facet of life” (p. 18). Although Eisner (1972) considered the major importance of the arts in education to be what they offer in regard to an understanding of human experience, he later noted that aesthetic representations hold particular promise in understanding the construction of different kinds of meaning (Eisner, 1998). In a similar vein, Dewey (1934/1989) argued that in order for an experience to be “complete” it must take on an external form or “embodiment” (pp. 58-59). For Dewey, the aesthetic affords a means by which individual parts of an experience are unified, as opposed to “merely succeed[ing] one another” (p. 61). In addition, works of art that are communally shared have the potential to further unify the community; artistic expression transcends the boundaries that separate individuals from each other—it is a universal language (Dewey). Dewey’s notion of art as “the most universal form of language” (p. 275) is not to be confused with modernist claims about truth; “the ‘universal’ is not something metaphysically anterior to all experience but a *way in which things function* in experience as a bond of union among particular events and scenes” (p. 291). For Dewey, art is the most effective means by which something becomes shared.

Greene (1995) wrote that the arts provide “opportunities for perspective, for perceiving alternative ways of transcending and of being in the world, for refusing the automatism that overwhelms choice” (p. 142). She suggested art as a way of knowing in which students strive to make sense of their world. She called for a pedagogy that embraces an integration of the arts, one that allows students to name and to write their lived experience. Through art, she claimed, students can become empowered to transform. Like Dewey, Greene underscored the communal component of art; she envisioned space in schools for teachers and students to engage in a dialectical relationship between the margins and the text as they construct meaning and exercise their own agency for the betterment of humankind.

It is in this framework that we examined students' art projects and their essays detailing their artwork. Art provided a medium through which two differing components emerged. On one hand, the students' projects characterized how they saw society and urban students; this component we term "art as reflection" because the art projects reflected back to the viewer the ways in which the participant saw those whom she tutored. On the other hand, the art project served as a catalyst for students to think through and make sense of their experiences in service-learning as they contemplated the lived experiences of those with whom they worked in the larger social, political, and economic context; this we term "art as reflective," as the project itself forced students to visually represent and, in effect, reflect on what this experience might mean. This double representation then—art as reflection and art as reflective—serves as a means to highlight the perceptions of the students themselves in relation to the urban experience and the broader social world. Following are selected excerpts from students' essays with descriptions of their respective art projects, grouped as *art as reflection* or *art as reflective*. It is not the authors' intent to present the students' individual projects as somehow mutually exclusive in regard to these categories, as doing so would deny the complexity of the service-learning experience. Rather, the purpose is to convey to the reader how art provided the students with a form of expression that helped them articulate how they perceived those with whom they worked, how they engaged in reflective thought about the impact of their experience, and how their attitudes about those with whom they worked related to greater societal forces. Some students clearly fall more within the realm of the former than the latter, while others became significantly involved in the latter. Further, those projects that expressed thoughtful contemplation about the impact of students' service-learning experiences on themselves generally are marked by some indication of a change in how the participants viewed those with whom they worked, whereas those projects that were more of an expression of how the students viewed those with whom they worked lacked indication of consideration of the social, political, and economic elements at work..

In the Conclusions, the authors provide further analysis situating the service-learning within the context of a course for first-semester students, many of whom had not been previously exposed to ethnic and racial diversity to the extent that their service-learning experiences allowed. The authors also expand on the use of the aesthetic as a supplemental form of assessment.

Art as Reflection

Raina¹ created a complex, three-dimensional collage depicting her experience working with African-American middle school males. The program with which she worked focused on helping adolescent African-American males gain academic and study skills to improve their chances to succeed in school. Raina and another female tutor were the only white people at the site during the times when Raina tutored. Feeling uncomfortable with not understanding the boys' free verse rapping and other elements of their culture, she took it upon herself to research famous African-American athletes and musicians so she could "be at their [the students'] level." She saw this as crucial to being able to work with them effectively. Juxtaposed on canvas were pictures of whom Raina deemed to be negative "examples of black males" around which she painted red representing "blood, murder, and weapons," with examples of those she viewed as successful--those who "have given a good definition to success without drugs, alcohol, and negative influences." Raina wrote of her students and her relationship with them:

Do these young boys want to be known for something great, or for getting shot because of a drug deal gone wrong?...I want to show these men that they can become something good, something wonderful. They can become someone, not a statistic. I want these boys to use their minds, not their guns, but use words to get out of situations; better yet, not be put into a situation. I have grown close to them and I care for them. I want the best...

While it is clear that Raina wants the boys she tutored to be successful and that she exerted much effort in that endeavor (by researching African American athletes and musicians, for example), her artwork regarding drugs and guns seems to demonstrate reified stereotypes and assumptions. This is how she potentially saw those with whom she worked. It would seem, then, that to this extent she did not come away from her service-learning experience with an attitude of openness towards the identity of these African-American young men as fellow human beings within the context of the broader society with all its vestiges of discrimination; rather, she

focused on her perspective of their situation and depicted their lives as being characterized by drugs and violence.

Rachel's art project included an image of the world created from felt material that was supported by a pair of hands. Rachel tutored children in a homeless shelter. She wrote:

From my service-learning opportunity, I have come to the conclusion that the world is ours. It is up to us to decide how we want to live, learn and interact with others. Anything is possible if you just believe.... I wish that I could have impressed upon the students in the shelter that even they can go to college and get a great job. The world is ours; sometimes it is not always fair, but working hard builds character.

Rachel's image of a world that "is ours" actually depicts a world in which individuals are responsible for their own success; and she believes that as long as one works hard, s/he will succeed. Clearly, the notions of opportunity and hard work provide a way to deal with the uncomfortable situations in which she found those whom she tutored. While hope bleeds through her comments, her presentation of the world serves to separate the individual from any larger structural forces that might have caused these situations. Rachel's comment that "working hard builds character" implies that the families in the homeless shelter are there because their characters are somehow deficient. Here, as with Raina's artwork, we see the artist's perceptions of those with whom she worked as exemplifying the attitude that if only they would do what Rachel advised and wished for them they would be successful. Rachel, however, does not make distinctions with regard to the different societal forces that affect those in the shelter and those who are successful; to Rachel, they are all part of "our world," and as such they should be able to be successful like Rachel. The world of which Rachel speaks appears to be her world.

Andrew tutored in a homeless shelter and created a photographic essay to depict his experience. He wrote of one of his photos, that of a “face” in the middle of a tree:

To me it represents the kids coming out of their shells. They put up this defensive barrier (the bark) and eventually I got them to come out of it. This isn't something that I ever thought I would get them to do. I mean, why would they relate to me, I am a rich white kid that goes to college. I have never lived in a shelter, or had to worry about where my next meal was going to come from. What I did have was the desire to reach these kids.

About a photo of a tree “on its side with two branches that appear to be arms,” he wrote:

The branches are to represent my outreach to these kids and my willingness to help them learn. I want these kids to like and respect me more than anything else in the world, and I have put myself out there for them.

Andrew's artwork was a clear representation of how he viewed the urban children with whom he worked. His photographs depicted a concern for himself and that “these kids” would not accept him and his efforts to help them. He assumed that they would not want to relate to him because of their different backgrounds and circumstances. The focus of his project reflected his perception of how the differences between him and the students might prevent his success at “reaching” them. While Andrew's artwork depicted his strong “desire to reach [those] kids,” it was very much embedded in the context of how he perceived the homeless children with whom he worked. Although he did get them to come “out of their shells,” his artistic expressions were, for the most part, limited to a depiction of his relationship with the children, exclusive of any indication of an awareness of the societal forces that impact the children's situation. While Andrew recognized his position of privilege, in the end he still spoke from privilege.

Art as Reflective

Sally made a music box that she entitled “What about their Dreams?” Her project shows her concern for the children whom she worked with and, by positioning those youth as *Other*, she comments on her sense of their lived experience and her own lack of understanding of urban education. She wrote:

The kids that I had have so many goals and dreams and it is our job as teachers, parents, and citizens to make sure that they reach them.

She goes further in describing the poem included in her music box:

I called the poem 'You Opened my Eyes' because this is indeed what they [the children] did. I did not realize that our schools were in so much trouble. I did not realize how many children were being truly left behind. I also did not know how little of my time it would take to make such a big difference in these children's lives.

Sally also included the song "From a Distance" by Bette Midler (1990; lyrics by J. Gold, 1985), which she said "portrayed the lives of our kids today." Her choice of the song interestingly points to how her own position is shifting in relation to the work of urban education. The lyrics of the song refer to the ease in which people can ignore the realities of poverty and war—we can ignore "from a distance"—but the lyrics also represent hope in resisting that position by moving towards action to "make a difference." This engagement with the realities of our larger community is precisely the point of service-learning. Sally's artwork demonstrated art as *reflective*, with its depiction of the impact her service-learning experience had on her, and this included altered assumptions about those with whom she worked. Unlike Raina, Rachel, and Andrew, Sally expressed through her art how she was enlightened in terms of how many children are "left behind." Here she is alluding to the No Child Left Behind Act of 2001 (signed into law by President Bush in 2002), which was discussed in class.

Melinda, who tutored children in a reading program, made a "flower pot of growth." She placed three different colors of cloth in the bottom of the pot to represent the three different racial groups with whom she worked. On the leaves of the stems, Melinda put words that represented what she gained from her experience. She wrote:

I wonder if I helped the students more than they helped me. Help, was I any help at all?
Probably. I think about the future and if I will ever do anything like this again. And at the top there is an open book. I think of this in two different ways. First, I think I am an open book to learning, taking everything as it comes. Second, I helped these students grow and develop their reading skills, they bloomed into children who enjoyed reading.

Melinda's use of art helped her reflect on her personal growth and change that she experienced through her service-learning; the leaves themselves represent growth. Her portrayal of herself as an "open book to learning, taking everything as it comes" illustrates her willingness to go into the experience with an open mind and to grow. This open attitude continued during her service-learning; her ambiguity regarding whether she helped the children attests to the reflective nature of her project.

Natalie, who tutored at a community center, created a "diversity mask to show the many different colors of people" at the center. She included a background of multi-colored hands "to show that if people reach out to each other and join together, anything is possible." She wrote:

I did this project because at my service-learning site, several different cultures, races, and socioeconomic backgrounds were represented.... I learned that it is okay to be different. The goal does not have to be to fit in with everybody around you. The children taught me that it is okay to stick out in a crowd. I learned that as a teacher, my role is to encourage and emphasize differences in positive ways.

Natalie commented that when she was growing up urban areas were places she "passed through on [her] way to some event," but that her "service-learning experience made those places a part of [her]."

Natalie's art project conveyed the complexity of her personal growth as she became exposed to diversity in ways that she had not experienced prior to her service-learning project. Her artwork and essay speak to her experience of grappling with the issue of conformity; her work with the Other taught her that it is okay to resist conformity. So, for Natalie, the service-learning experience was in a sense a liberating one. Urban areas have even become "a part of [her]."

Chloe tutored in a homeless shelter and made a diorama to represent her service-learning experience. She wrote:

When I first started my service-learning I was very surprised to find the conditions my students were in physically. They all had good clothes and good shoes with literally no physical signs to show that they were homeless.... I firmly believe that in order to come up with a solution to homelessness we must look past our stereotypes of what a homeless person looks like and see

who it really affects, that it is not just the people you see holding a sign up on the street. I divided my diorama into two parts, one with a picture of a homeless man holding up a 'Will work for food' sign in the middle of a median and the other with normal looking children of all different ages and races. I made a sign saying 'Homelessness: What you see, what you don't see'... We should be aware of our students' different backgrounds and remain sensitive to that, but the expectations of them should not be that different than those who aren't struggling. If we expect little from them, they will achieve little and we will fail them.

Chloe's diorama represented her recognition of the multifaceted nature of homelessness and her changed assumptions about homeless people as a result of her service-learning. Her artwork exemplified the dichotomy of, on the one hand, the stereotypical image of homeless individuals, and, on the other hand, the "similarity" of homeless families to those in the mainstream. Chloe's work with homeless children not only changed her assumptions about homeless individuals' appearance, but also reinforced her attitude that high expectations should be held for all children to reach their potentials. So while she recognized the need to be sensitive to students' individual backgrounds, she focused on the teacher's role of having high expectations. Although Chloe apparently failed to recognize the complexity here regarding the social, economic, and political forces at play, the authors chose to present Chloe's artwork as *reflective* due to her acknowledgment of the harmful effects of having lower expectations for children with low socioeconomic status.

Other students' artwork took various forms, such as a crafted puzzle, a decorated cake, a quilt, pillows, posters, drawings, scrapbooks, and decoupage. Whatever the form or genre, each was a depiction of the subtle and the not-so-subtle, the blatant and the nuanced, the complex and the simple.

Conclusions

Through art the students were able to capture more of the "whole" of their experiences, the positive and the negative, the exhilarating and the frustrating. As Eisner (1972) noted, the visual arts highlight the "seemingly trivial aspects of our experience" (p. 16), thereby allowing us to discover new value in it. The process of the making, the creating, the doing itself facilitates a heightened awareness of what was, what is, and what could be. As Eisner said, it "enlarges our consciousness"; "it serves as an

image of what life might be” (p. 16). Their projects helped the students articulate their own commentaries about what they saw and how they felt. For some, this primarily consisted of art as reflection—descriptive depictions of how they perceive society in the context of urban schools and community centers. For others, their art was reflective—a means by which to contemplate their experience in the greater social, political, and economic context. Returning to Dewey’s and Greene’s notion of art as communal, we are able to see the implications of the creation of individual student projects around shared but different experiences. As my students presented their artwork to faculty and each other, they were able to feel a connection with the School of Education even before they entered the Teacher Education Program. In addition, the formal exhibit afforded the students the opportunity to share their art with each other. They took an active interest in their peers’ work and what their classmates had to say about their service-learning experiences through their art. The visual was attractive; it attracted others to “see” and hear.

Art offers a powerful medium through which students can express their experiences with service-learning. For many students coming into this introductory course, it was their first experience with service-learning and/or working with urban individuals. Art combined with other forms of reflection, such as written and oral, provided the students with a means to more fully express and understand their experience. For some students, this project involved little attention toward the social, political, and economic forces at work in the situations of those with whom they worked; for others, it became a catalyst through which students could more fully express and articulate their own process of making sense of their experiences in the larger societal context. As such, students’ artwork itself became part of this process; the *doing* of art forced the students to further engage in *reflection/the reflective*. Art form affords the students that “embodiment” toward “completeness” to which Dewey referred. As a capstone project, the artwork served as a chance to bring it all together, to express the problems and the possibilities for change that the students found themselves grappling with during their service-learning. It bridged the spoken with the unspoken and facilitated a forum in which students could share their alternative ways of knowing with each other. It is important to note that as “unfinished” (see Freire, 1998) business, the process of becoming for the students is ongoing. The service-learning experience was, for many, an initial phase. For pre-service teachers this process is one of “becoming teachers” (Helfenbein, forthcoming). As Weisskirch (2003) noted, the First Year Experience combined with service-learning can facilitate an

opportunity for attitudinal change in students as they progress into adulthood and are directed to reflect on their service-learning experiences. He maintained that these changes and the accompanying learning that takes place cannot be easily assessed by quantitative methods. Rather, a qualitative approach provides an appropriate means to assess more fully and accurately the changes that take place in students through their own words, specifically through journal writing. Again, as noted by Weisskirch, what ensues might turn up the unintended as well as the intended; students are able to reflect on things that, although not intended, are meaningful to them. We argue that art is a significant extension of this qualitative approach. The aesthetic experience enables us to see both a *reflection* of how students perceive those served and the *reflective* nature of how students process their experiences within the social, political, and economic context of the lived experience of those served in a way that mechanistic, standardized forms of assessment do not. Weisskirch's (2003) notion that service-learning particularly lends itself to reflection in general (here again we use the term more broadly) due to the fact that the experience itself provides the chief source of information is key here. And art affords the student another dimension with which to process his own changes, whether they involve *reflecting* on his own assumptions and perceptions of those with whom he worked, and/or *engaging in reflective consideration of what his experiences mean as he grapples with the social, political, and economic complexities inherent in the lives of those served through his service-learning*. Greene (1995) best captured the complexity of art as pedagogy: "Art offers life; it offers hope; it offers the prospect of discovery; it offers light. Resisting, we may make the teaching of the aesthetic experience our pedagogic creed" (p. 133).

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Notes

¹ Pseudonyms were given to the students for the purposes of anonymity. Minor editorial changes were made in students' excerpts for the sake of clarity.

Collaborative Testing, Gender, Learning Styles, and Test Performance

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Abstract

Prior research provides little systematic evidence on student perceptions of collaborative testing. The scarce information that is available is usually in the form of a few instructor or student comments that characterize in general the collaborative experience. Likewise, one finds little evidence on how reactions to collaboration differ by student characteristics and test outcomes. Knowledge of these perceptions and variations can lead to a better understanding of how collaboration works and can better equip instructors for using collaborative testing. The present study begins to fill in this evidence gap. We report the results of a post-collaborative test survey and how those responses are associated with gender, learning style differences, and test performance.

How do students collaborate on paired or group tests? How do students perceive collaborative testing? Do those perceptions differ by gender and learning styles? What beliefs and behaviors are associated with better test performance under collaborative testing? Given the large body of accumulated research on collaborative learning, it is surprising to find few answers to these basic questions. The scant evidence available suggests that collaborative testing can be a powerful technique for enhancing academic achievement and for developing skills relevant to workplace success. Knowledge of these perceptions and behaviors, and the factors that are associated with their variation, are important for a better understanding and improved application of this teaching and learning method.

In 1990, Lunsford and Ede asked how gender, race, and class may affect classroom collaboration and concluded that at the time they could only offer vague answers to their questions. It seems to us that more than fifteen years later we still have only vague or impressionistic answers. In this paper we report evidence from a larger study of collaborative testing in which we systematically surveyed students about their collaborative experiences. We present a set of empirical results against which others might make more precise comparisons of collaborative learning outcomes. We also report how student reactions to and evaluations of collaborative testing differ across gender, learning styles, and test performance. Suggestions are offered for teachers interested in using collaborative testing and questions for future research are raised.

Literature Review

Collaborative learning is probably the most widely studied of all teaching techniques. Johnson, Johnson, and Stane (2000) found that over nine hundred studies of social interdependence have been conducted over the past one hundred years. Those that fit the criteria for inclusion in their meta-analysis of collaborative learning collectively report one hundred ninety-four different comparisons of the effects of various collaborative learning techniques on measures of academic achievement. A smaller number of studies report the effects of collaborative learning on non-achievement outcomes such as intergroup relations, acceptance of diversity, self-esteem, locus of control, class attendance and participation, quality of interactions with teachers and classmates, course satisfaction, and other outcomes (see Slavin, 1995; Millis & Cottell, 1998).

Within this large body of research, though, one finds very few studies that examine collaborative testing. Collaborative testing is an extension of collaborative learning into the evaluative setting. In the large majority of instances described in the prior research, collaboration among students is used as a means to learn subject matter on which students are then tested as individuals. The relatively few studies that report on collaborative testing find the technique to be beneficial in a number of ways. Achievement is enhanced, anxiety is lowered, and satisfaction is increased (Guest & Murphy, 2000; Grzelkowski, 1987; Hanshaw, 1982; Helmericks, 1993; Ley, Hodges, & Young, 1995; Muir & Tracy, 1999; Nowak, Miller, & Washburn, 1996; Russo & Warren, 1999). There are, however, at least two major shortcomings that characterize almost all the studies of collaborative testing we located. First, the evidence they present concerning student reactions to and evaluations of collaboration is often anecdotal and expressed in qualitative statements such as “most agreed” or “the majority were satisfied.” Ignoring possible problems of self-selection bias concerning which students are likely to offer comments and the self-censoring of those comments, these kinds of general statements are not adequate for making precise comparisons across studies and may not be very useful to teachers interested in evaluating their own collaborative testing experiences. For this, instructors need an empirical baseline against which they can compare their experiences. Second, there is almost no investigation into how the association between collaboration and student behaviors, beliefs, and attitudes may differ between groups. Among the multiple dimensions that may be important, collaborative testing experiences may differ by gender, learning styles, and test outcomes.

Belenky, Clinchy, Goldberger, and Tarule (1997) argue that women and men differ in their ways of knowing. Women have a preference for connected, socially-based knowledge. Their learning style is more cooperative and less individualistic and competitive. Men, on the other hand, are oriented toward individualistic and competitive learning environments. Consequently, women prefer collaborative learning more so than men. Lundeberg and Moch (1995) found support for this thesis. Ocker and Yaverbaum (2001), however, report that men in their study were more comfortable with collaborative team assignments.

Learning styles are the characteristic ways that students obtain, store, and retrieve information (Felder & Henriques, 1995). Though different measures of learning styles identify somewhat different

learning style dimensions, most measures include a dimension that contrasts active and reflective learners. The active-reflective contrast is similar to the Jung's and Myers-Briggs' extravert-introvert personality types (Felder & Silverman, 1988). Active learners prefer to process information through discussion or doing something with the information. Reflective learners process information through moments of quiet introspection. Due to their learning style preferences, active learners work well in groups while reflective learners may be hindered by such learning situations. Group work that does not allow for a period of reflection, such as collaborative testing, may be more of a hindrance than an aid to reflective learners.

Lastly, it is important to examine how student perceptions and behaviors correspond to their actual test performance. These associations suggest which kinds of behaviors lead to higher test scores and if perception of collaborative testing is dependent on test performance.

Data and Methods

The data is drawn from two independent experiments on collaboration that took place in consecutive spring semesters at a liberal arts college. Subjects were students in five sections of an introduction to sociology course. One hundred fifty-nine students, eighty-seven in the first experiment and seventy-two in the second, completed all the instruments required for inclusion in the analysis. Fifty-one percent of our students were freshmen and another thirty-five percent were sophomores. Sixty-one percent were female. Thirteen percent were non-white.

At the beginning of the semester, students were told that they had the opportunity to participate in a research study on learning and that participation was voluntary. In the first experiment, those who chose to participate would be allowed to take their second course exam with a randomly assigned same-sex partner and then complete a post-collaborative survey. They would take their first and last exams by themselves. Partners for the second exam would be assigned the day of the exam so students would not have the opportunity to engage in collaborative learning with their partner or build rapport with their partner beyond what might have been built during prior class meetings. Almost all students chose to participate. We administered a post-collaborative survey at the beginning of the class immediately following the collaborative test day and before students received their grades. The survey contained both

closed-ended and open-ended questions. The closed-ended questions are scored 5 = “strongly agree” to 1 = “strongly disagree”.

In the second experiment, a new set of students were similarly instructed about the testing and partnering process. Unlike the first experiment, they would take all three exams with their partner. Partners were determined early in the semester thereby allowing subjects to prepare collaboratively and build rapport before their exam. For the analysis in this paper, we examined the data for the second exam only for both semesters. The context of the second experiment is, of course, different and combining data from the two semesters may be cause for concern. Our post-collaborative survey data shows, however, that very few students actually worked together in preparation for any of the three exams. This difference, therefore, may not be significant. Further, while the students in the second experiment had the experience of a first collaborative exam and post-test survey, their second exam post-test survey responses are highly similar to those of the students in the first experiment. Lastly, we find no significant difference in the average second exam scores for the two sets of subjects. These pieces of information suggest that the context was not so different as to invalidate combining the data from the two experiments.

Learning styles are measured by Solomon and Felder's *Index of Learning Styles Questionnaire*. This data is available for the first experiment only. They indicate that just over three quarters of the students prefer an active learning mode while the remainder prefers a reflective mode.

Test performance is measured as percent correct of seventeen multiple-choice questions that were common to each instructor's exam. These questions covered subject matter that all instructors agreed their students had exposure to either through class discussion, lecture, or reading. Students averaged eighty-one and eighty-two percent correct on these seventeen items in the first and second experiments respectively.

Analysis and Discussion

Table 1 (see below) presents the percentage of subjects agreeing or strongly agreeing to nine closed-ended questions about their collaborative experiences. How did subjects work together? Numbers 1 and 2 show that almost all settle on a common strategy for answering questions and almost eighty-five

percent work at a similar pace. Although they were not instructed in how to test collaboratively, it appears that this novel testing situation presented no significant problems with the question-answering process for the majority of subjects. Numbers 3 and 4 indicate that about ninety percent both helped and received help in understanding from their partner. These high percentages suggest that the exam was truly a cooperative, shared experience. They also suggest that retention of learned information should be higher since explaining something to another person is associated with higher retention. The association between collaborative testing and retention may be a fruitful area for future research.

Responses in numbers 5 and 6 reflect psychological or emotional outcomes. Ninety percent believe that a partner made the exam less stressful. Because prior research shows that high levels of test anxiety can reduce test performance, the self-reported lowering of stress seen here should be associated with higher test scores. Subjects also say that having a partner made them feel more confident. This too could lead to higher test scores. On the other hand, having a partner may account for why no more than seventy-seven percent of students say they prepared more thoroughly for the exam. Perhaps the knowledge that they would have a partner led some to slack off or become free-riders. Numbers 8 and 9 reflect subject beliefs about the utility of collaboration. Ninety-four percent agree that collaboration is good for preventing "stupid" mistakes. Our data does not allow us to investigate what kinds of mistakes they mean by "stupid" or the extent to which they are catching such mistakes versus what must be, in their understanding, "non-stupid" mistakes. Future research might examine this mistake-catching function of collaborative testing. Additional research might also examine why and how some students are preparing more thoroughly than others. What is the motivating force behind this behavior? Lastly, ninety-three percent report that collaborative testing is better than individual testing. This is consistent with the impressions and anecdotal evidence of prior studies. But, since seven percent did not agree, we feel that it is important that teachers keep this practice voluntary and seek to understand why some students find individual testing preferable.

The open-ended questions asked subjects to identify what was good and what was bad about collaborating on the exam. The two most frequently mentioned good aspects concerned issues of interacting with others and confidence. About thirty percent wrote that sharing, talking, and the process of working with someone were beneficial. Approximately twenty percent mentioned feeling more confident,

yet only three percent wrote that it made them study harder.

Forty-five percent wrote that nothing was bad about collaborating. The most commonly cited drawbacks were negative feelings about negotiating disagreements and second-guessing themselves and time pressures. These drawbacks were mentioned by approximately twenty-two and twelve percent of respondents, respectively. Less than ten percent felt pressures associated with being partly responsible for another person's grade and only about five percent felt that their partner was unprepared. Lastly, less than five percent believed that noise was a problem.

Table 1
Post-collaborative Survey Responses, Closed-ended Questions

	Percentage Agreeing or Strongly Agreeing
1. Partners used a similar strategy to answer questions.	96
2. Partners worked at a similar pace.	84
3. I helped my partner understand.	92
4. My partner helped me understand.	89
5. Having a partner made taking the exam less stressful.	90
6. Having a partner made me more confident.	89
7. I prepared for the exam more thoroughly.	77
8. Collaborative testing prevents "stupid" mistakes.	94
9. Overall collaborative testing is better than individual testing.	93

We next examined the associations among gender, learning styles, test performance, and our survey results. The zero-order correlations are shown in Table 2. For gender, we find a significant correlation with agreement that having a partner made taking the test less stressful. It is our male students who are more likely to agree. If lower stress leads to higher test scores, and in our data these variables are positively and significantly correlated, it is male students who are, on average, more likely to

receive this benefit of collaboration. Contrary to earlier findings, we find no association between gender and preference for collaboration over individual work. Indeed, except for one outcome, we find no significant gender differences.

The learning style correlations show that active learners are more likely than reflective learners to agree that their partner helped them understand, that a partner made them more confident, that they prepared more thoroughly, that stupid mistakes were prevented, and to rate collaborative testing as better than individual testing. Although preparing more thoroughly is not significantly correlated with test performance in our data, it is significantly associated with confidence. It is perhaps not surprising that active learners would rate collaborative testing higher than reflective learners. Active learners have a preference for engaging the material in some active way and for group work. Collaborative testing provides an opportunity for actively discussing and debating the material. Reflective learners prefer to work alone, to have an internal conversation reflecting on the material, and may find active engagement in a testing situation to be distracting. Teachers should take learning styles into account and advise students that collaborative testing may not be to everyone's liking.

Finally, we note that higher test scores are significantly and positively correlated with helping a partner understand, having a partner that helped them understand, agreeing that a partner lowered stress and increased confidence, and agreeing that collaborative testing is better than individual testing. If it is true that being able to teach something requires more understanding than is needed to simply answer questions about that same thing, then it makes sense that students who said they helped their partner understand also scored higher on the exam. Those students had a better understanding of the material as shown in their ability to help others understand. Teachers using collaborative testing might have students engage in some practice teaching of each other in order to deepen their understanding and increase their ability to help each other in collaborative situations.

Table 2
Collaborative Testing, Gender, Learning Style, and Test Performance

	Gender	Learning Style	Test Performance
1. Partners used a similar strategy to answer questions.	-.097	-.019	.041
2. Partners worked at a similar pace.	-.129	-.148	.082
3. I helped my partner understand.	-.047	.177	.332**
4. My partner helped me understand.	-.135	.255*	.180*
5. Having a partner made taking the exam less stressful.	-.220**	.144	.231**
6. Having a partner made me more confident.	-.135	.459**	.214*
7. I prepared for the exam more thoroughly.	.041	.227*	-.008
8. Collaborative testing is good for preventing "stupid" mistakes.	-.069	.281**	.113
9. Overall collaborative testing is better than individual testing.	-.093	.273*	.245**

^a Data from the first experiment only.

Note: The nine survey items are score 5 = strong agree to 1 = strong disagree. Gender is coded Female = 1, Male = 0. Learning style is coded Active = 1, Reflective = 0.

* = $p < .05$ ** = $p < .01$ two-tailed tests

Conclusion

The results of this study provide an empirical baseline against which others can compare their collaborative testing outcomes. They also indicate some significant differences in beliefs and behaviors related to the collaborative testing experience across gender, learning style preference, and test performance. These differences should be taken into account when using a collaborative testing format. Overall, student perception indicates strong support for collaborative testing.

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Using Focus Groups for Student Evaluation of Teaching

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Abstract

Traditional means of evaluating instruction, though reliable, are limited in scope. In this paper, I provide an argument and a template for the use of focus groups as a supplemental tool for gathering student feedback. I begin with a brief discussion of focus groups and an examination of the traditional student evaluation process. Next, I discuss the advantages of using focus group research to supplement that process. After considering some of the shortcomings of focus group research, I provide specific suggestions for using this means of collecting data. I conclude with a case study example of the preliminary results of my own focus group inquiry.

Introduction

One cannot be an academic for any length of time without hearing colleagues complain about student evaluations. Though there is an ongoing debate in the literature about the validity of standard quantitative course evaluations, the majority view is that these evaluations are valid (for example, Marsh & Roche, 1997). Nevertheless, researchers also criticize traditional means of gathering student feedback as failing to capture critical elements of student response to a course (Kolich & Dean, 1999). A predetermined set of closed items does not enable students to provide unexpected, and possibly valuable, feedback. Even the open items present on many course evaluation forms do not allow students, who often hastily scribble nonspecific comments ("Dr. G rocks!") so they can get out of class, to provide appropriately rich feedback. Other methods of soliciting student feedback may assist in providing instructors with more varied kinds of responses.

One way of soliciting additional student feedback which I have found particularly valuable is the focus group. This method of collecting data encourages students to reflect on the instructional process in a much more ruminative fashion, considering the opinions of other group members as they refine their own insights. Through addressing a series of loosely-structured open questions, small groups of students provide more detailed feedback which enables instructors to have a different perspective on how the course has been received.

In the pages that follow, I argue for the value of using focus groups as a tool to supplement traditional student evaluations. These groups can consist of current students or former students, as discussed below. As part of this argument, I utilize the perspective of the scholarship of teaching and learning (for example, Boyer, 1991; Trigwell, Martin, Benjamin & Prosser, 2000), which encourages academics to reflectively transform their teaching practices in light of pedagogical research. First, I briefly describe the focus group methodology for readers who may not be familiar with it. Next, I discuss the traditional evaluation process and consider advantages and disadvantages of incorporating focus groups as a supplemental tool. After providing specific suggestions for using focus groups in this manner, I close by providing an example of my own focus group-based evaluative research, briefly discussing how this research has influenced my own instructional practices.

Focus Group Methodology

Morgan describes focus group methodology as "a research technique that collects data through group interaction on a topic determined by the researcher" (1996, p. 130). The group interaction allows for a different sort of response than that generated by interview questions, and the open-ended questions allow for a very different sort of data than that typically generated by survey instruments. Focus groups allow researchers to explore predetermined topics in depth, and can allow for the emergence of previously unconsidered topics as well.

Focus group research is commonly employed in communication, sociology, and related disciplines. For example, Press and Cole (1995) used focus groups consisting of pro-life women to analyze their rationale for their beliefs, and Grover and Nangle (2003) used focus groups of adolescents to explore problematic opposite-sex situations. In both of these studies, focus group conversations allowed a level of depth of discussion that would not have been possible using survey methods alone. Also, the group interaction process allows for student concerns to be raised and discussed in a collaborative manner which is not possible with one-on-one in-depth interviews. One student might raise a particular issue, but any number of participants might comment on this issue after its introduction.

Focus groups have also been used in a limited way to supplement the traditional evaluation process. Clark and colleagues (Bennett, 1987; Clark & Redmond, 1982; Redmond, 1982) developed and utilized the Small Group Instructional Diagnosis method (SGID) as a way of providing formative evaluations for faculty at about the midpoint of the semester. The standard technique (which has been adapted for use in an online environment; see Sherry, Fulford, & Zhang, 1998) involves having a trained facilitator visit a class for about 25 minutes, dividing students into small groups and soliciting their opinions on three general questions about how the course is proceeding thus far. Then, the facilitator meets with the instructor to provide a summary of student feedback. Researchers have suggested that not only can faculty adjust courses according to feedback, but also that students show higher levels of motivation for the remainder of the semester after participating in the process (Redmond, 1982). The focus group research outlined below differs from the SGID in that it is generally designed to be a formal, detailed summative evaluation, conducted after the end of the semester. Also, the more detailed questions and the formal transcription process suggested below allow for greater insight, though the

process is far more time-consuming than a formative SGID. Both the SGID and the focus group process discussed in this paper can help overcome some of the potential flaws of traditional student evaluations, discussed below.

Traditional Student Evaluations

Academic research into the validity of student evaluations has been extensive, for at least three reasons. First, those evaluations are often used by administrators as a way of evaluating the quality of instruction provided by faculty (McKeachie, 1997). Second, instructors presumably study evaluations carefully and consequently develop alternative instructional strategies when appropriate. Finally, student evaluations are a commonly used tool in academic departments of all sorts, both in the United States and elsewhere (for example, Kember, Leung, & Kwan, 2002; Beran & Violato, 2005).

Generally, research suggests that quantitative student evaluation forms are both reliable and valid (Marsh & Roche, 1997; Berlan & Violato, 2005). Indeed, McKeachie (1997) argues that "student ratings are the single most valid source of data on teaching effectiveness" (p. 1219). Concerns with quantitative evaluation of instruction tend to focus not on the instruments themselves, but on how they are utilized by faculty, students, and administrators.

Some researchers are concerned that faculty and students may not take the evaluation process seriously, thus undermining the validity of the process (e.g. Richardson, 2005). Spencer and Schmelkin (2002) suggest that although students do not fear reprisals as a result of the evaluation process, they "are unsure whether their opinions matter," and so may not devote as much careful attention to the evaluation process (p. 406). D'Apollonia and Abrami (1997) argue that though the evaluations are valid, they are often over-interpreted by administrators, who use them to make judgments about teaching which are too fine-grained. In fact, these scholars suggest that only the most basic judgments about teaching effectiveness (such as "exceptional, adequate and unacceptable") can be inferred from student evaluations of instruction.

Though these concerns about traditional student evaluations are intriguing and worthy of further research, two additional concerns provide the strongest impetus for the search for alternative, additional means of evaluation of instruction. Kolich and Dean (1999) argue that traditional student evaluations

privilege what they call a "transmission" model of instruction, with a focus on a lecturer imparting knowledge to a relatively passive audience. Within this model, "absorbing quantities of knowledge is more important than the construction of knowledge, which takes into account students' lives and experiences" (p. 30). Kolich and Dean (1999) instead advocate an "engaged-critical model," which views instructor and students as co-constructing a learning environment. Though Kolich and Dean suggest that additional survey items can capture this alternative approach to instruction, I believe that focus groups can provide more detailed student feedback to better assess the extent to which the engaged-critical perspective is employed. Through focus group interaction, and the subsequent analysis by the instructor, students participate in the co-construction of future courses.

The second particularly problematic issue related to traditional student evaluations concerns their use by faculty. Kember, Leung and Kwan (2002) found that professors did not generally improve their evaluations over time, and argued that this lack of quantitative improvement suggests that professors are not incorporating their students' suggestions in subsequent semesters. According to these scholars, the evaluations are thus failing to accomplish what is presumably their primary goal: fostering instructional improvement. Perhaps part of the reason why professors do not more carefully utilize student evaluations can be found in the work of Narasimham, who found that half of the qualitative comments on student evaluation forms were two words and "were really of no value" (2001, p. 182). Thus evaluations still can be used by administrators to evaluate instruction, but lose a great deal of utility if they are not accomplishing a critical goal. By allowing for more detailed feedback, focus groups may contribute to improvement of instruction for professors willing to use this supplemental methodology in a manner discussed below.

Value of Focus Groups as a Tool to Supplement Evaluations

It is not my suggestion that focus groups should be used to replace traditional means of student evaluation of instruction, which clearly still have an important role to play. Instead, I argue that faculty members who are committed to improving the quality of their teaching can use focus groups as a way of receiving additional, rich feedback from students. In the following section, I discuss several advantages of using a focus group methodology in this manner.

Supplemental focus group evaluation allows faculty members to ask questions which go beyond the typical student evaluation forms. Though some of these scales (notably one commonly used questionnaire, the Student Evaluation of Educational Quality) have been found to be reliable and valid, not all academic units will use these forms. In fact, it is common for academic units to add their own questions, which may not reflect the goals of a particular instructor or even be empirically sound (Marsh & Roche, 1997). Using focus groups allows an instructor to develop his or her own questions and better reflect those concerns which may be particularly salient for a given instructor, program, or class. For example, I have asked former students in my research methods classes about the practical value of the course, which is of particular concern to me: I want my students to see the class as applicable to the "real world." This question is not included on the standard evaluation questionnaire in my department.

Using focus groups can also enable professors to evaluate student responses beyond a single class. Groups of students who have had a particular class or professor can meet to discuss their common experiences, including providing a sense of how a particular class might relate to other classes. For example, I asked my research methods students how that class helped to prepare them for other classes in the major or internships; students filling out the evaluation form at the end of their class could not be expected to answer this question. Harvey (1997) also has suggested that focus groups could be used for this sort of investigation, though he concentrates on constructing additional survey items following the use of a focus group methodology. In contrast, I suggest that although the focus groups could be used for that purpose, data from the groups have an intrinsic value separate from leading to the construction of new survey items.

Also, focus groups enable students to suggest important issues which may not be listed on the traditional form. The open nature of questions, along with group interaction, allows for discussion to focus on aspects of a course which an instructor might not have considered. For example, when I asked my research methods students which element of the course they found most valuable, they emphasized the library research component--not at all what I would have expected. When individual group members mentioned this component of the class, other members were able to contribute their own ideas.

Perhaps the greatest advantage of the use of focus groups as a supplement to traditional student evaluations is that they help instructors break out of what the novelist Walker Percy (1961) called

"everydayness"--a lack of reflection, in this case on a life of instruction that might involve teaching the same classes for years without change. If a professor has taught the same class for an extended period of time, to generally good reviews via the traditional process, that professor is probably not likely to consider ways of improving the class still further. Initiating any sort of supplemental evaluation process requires a professor to break out of this "everydayness," as she must carefully consider the supplemental questions she wishes to ask.

Considering themes from focus groups can encourage additional introspection on the part of an instructor, potentially leading to what Mezirow (1990; 1991) calls "transformative learning." Through the process of carefully considering basic assumptions related to teaching, an instructor may develop entirely new approaches to the craft. As students learn from instructors, professors as adult learners can consider their own approaches to teaching. This constant, careful, self-critical evaluation is, as Ramsden (2003) suggests, essential to improving as a teacher. Careful construction and interpretation of focus group questions can assist in this process.

Finally, students are more likely to take this process seriously than they apparently do the typical course evaluation process. They can observe that a professor is making an extra effort to solicit their opinions, and are likely to respond more positively to that endeavor. In addition to feeling that their opinions are more valued by a particular professor, students may appreciate the idea that their reactions to a given course might influence how that course is taught in the future, and thus have a greater sense of participating in an important process for an academic department.

Limitations of Using Focus Groups

Though the use of focus groups to supplement the traditional process has certain advantages, as discussed above, the process also has some significant drawbacks. Of these, the most obvious is time. It is much easier simply to hand out the forms at the end of the semester than to take the time to construct a set of questions, recruit students, meet with groups and transcribe their interactions. Part of my goal in writing this paper is to persuade the reader that it is, in fact, worth the effort. One way of minimizing this effort on the part of the instructor involves recruiting other students to help with part of the process, perhaps for course credit. I recruited two students who had previously taken my research methods class

to help with recruiting students, facilitating groups, and working with transcripts; the experience provided tangible rewards for them, in that it gave them course credit and a valuable line on a résumé. More importantly, it gave students valuable research experience and the opportunity to participate in an important group process.

Recruiting students to help also addresses the second key problem of using focus groups: anonymity. Students are perhaps less likely to be brutally honest if they can be connected with their responses. There are a variety of ways to overcome this concern; having student facilitators lead the groups can help. Even though I taped the students' interactions, I believe that communicating with another student who was physically present allowed them to feel more relaxed and be more open with their comments. Also, it enables the instructor to completely remove himself from the process, allowing the student facilitators to tape the interactions and transcribe them with names removed, ultimately protecting the participants' confidentiality.

Implementing Focus Groups: Getting Started

There are a variety of ways to implement a focus group methodology. The simplest use of focus groups is at the individual class level; an instructor might dedicate a class period to dividing students up into small groups with video cameras and previously trained student facilitators. Instructors might also use focus groups to recruit as many students as possible who have taken a particular class, or who have taken a variety of classes from a particular instructor. It might be particularly interesting to try to recruit students who have taken a class from a particular instructor and graduated, to see to what extent they still remember and use information or skills from classes. It is also possible to use focus groups for more programmatic assessment, though that usage is beyond the scope of this paper (see Harvey, 1997, for a more detailed treatment of this use of focus groups).

Morgan (1996) suggests that focus groups can vary in size, depending on the degree of emotional involvement of participants and the extent to which facilitators desire in-depth comments from individual participants. Grover and Nangle (2003) found that small groups of three to eight participants worked well; Tiggeman, Gardiner & Slater (2000) achieved good results with groups of 10 to 16. I have found that a recruited group of eight is ideal. I assume that a few students might not show up for any

given session, and I prefer to have groups of about five to eight students. For me, this number allows for a variety of opinions, while still small enough to enable a facilitator to hear detailed comments from every participant. Providing an incentive for students increases the probability of them showing up. Such an incentive might include extra credit (if your university's IRB allows it), or perhaps a pizza break in the middle of the group session. The groups can be run by trained student facilitators or by the faculty member herself. Though as noted above, it is probable that students will be more likely to speak freely in front of a fellow student. Focus groups should be recorded.

Questions for focus groups should be developed in advance, using a semi structured protocol. It is possible to conduct focus groups with only a list of themes, not questions--but I believe this unstructured approach is best reserved for the most experienced of facilitators. Instead, a list of open questions should be developed which allows for plenty of latitude in student responses. The questions should be developed through a careful consideration of the critical issues of interest to the instructor, but instructors should also consult relevant literature. The questions that I used for my focus group investigation of responses to my research methods class are attached as an example (see appendix A). Facilitators should be advised to ask all of the questions on the list; they should also be willing to ask probing questions and to discuss the unexpected issues which almost inevitably surface when using this method. Facilitators are asked to maintain flexibility and guide conversations rather than control them.

Facilitators also should remember that focus groups are not decision-making groups, but instead are designed to collect opinions without necessarily reaching a consensus. The opinion of every member of the group is important, so facilitators should encourage reluctant members to speak, and make sure one individual does not dominate the sessions. Some focus group researchers suggest utilizing an anonymous, quantitative manipulation check to ensure the process went well (Morgan, 1996). I have also attached an example the manipulation check survey form I have used in my research (see appendix B).

Facilitators should be familiar with all aspects of focus group research before leading a group. Facilitators should start by reading articles on interviewing and focus group methods (i.e., Fontana & Frey, 1993; Morgan, 1996), along with several published focus group studies (i.e., Press & Cole, 1995; Grover & Nangle, 2003; Tiggeman, Gardiner & Slater, 2000). They should have an appreciation of the goals of the instructor, and might also participate in the process of brainstorming questions. Finally,

facilitators should conduct at least one taped practice group session with feedback from the instructor or another party; if the practice group session is sufficiently similar to the later groups, focus group researchers suggest that it can be included in the overall data analysis (e.g., Grover & Nangle, 2003).

Implementing Focus Groups: Analyzing Results

The critical first step for any kind of focus group analysis is transcription. Typically, verbatim transcription is sufficient, and more detailed methods of transcribing language such as the conversation analytic system need not be employed. As instructors or assistants are transcribing, they should start to note themes which may be emerging.

Once transcribing is finished, researchers should go back through transcripts and begin developing themes, the recurring perspectives suggested by group members (e.g., Grover & Nangle, 2003). There are a variety of methods for finding themes including grounded theory, content analysis, and schema analysis (Ryan & Bernard, 2000). One formal way to develop themes is called the constant comparison method. This procedure involves comparing each remark to the previous remarks as a series of categories begins to emerge and is altered over time (Baxter & DeGooyer, 2001). Instructors can use any qualitative means of textual analysis with which they are familiar to arrive at interpretations which can then be incorporated into their teaching.

Implementing Focus Groups: Incorporating Results

Carefully constructed questions and painstaking analysis should lead to the construction of themes that an instructor will find valuable. Ideally, any incorporation of results into future classes should, from a "scholarship of teaching and learning" perspective, begin with a consideration of what the education and/or discipline-specific literature suggests about the particular issues raised. For example, my students suggested that the research methods class was not well-connected to the "real world," so I searched for ways in which other instructors might have overcome this concern. I found research by Keyton (2000), a scholar in my discipline, who suggested that service learning might be incorporated into the course. Another scholar in psychology (Anisfeld, 1987) suggested that having students focus on reading methods and results sections of published articles can help them understand the applicability of

knowledge and skills from a research methods class. Students also expressed concerns about anxiety related to the class, and so I consulted work in educational psychology (e.g. Onwegbuzie, 1997; Onwegbuzie et al., 2000) to examine the effects of anxiety on student performance in that class.

Instructors also should measure the extent to which the changes they implement make a difference in the course. Some of these changes might be reflected in the traditional course evaluation forms, but instructors are probably better served by constructing their own survey items designed specifically to address the changes made. Alternately, instructors could employ the focus group methodology again to assess changes. Regardless of the method, some means of assessing significant changes made to a course, or series of courses, should be utilized.

Case Study: Focus Group Study of Reactions to Research Methods Class

Though I have alluded to my own focus group investigation throughout this manuscript, it is helpful to provide a brief overview of my own use of focus groups as a supplemental evaluation tool. A more detailed discussion of this effort is available elsewhere (Fife, 2005). I will briefly describe the rationale, method, results and conclusions reached through this focus group research, including a discussion of how it has influenced my instructional practices.

Case Study: Rationale

Though I have spent much of my career teaching research methods classes in the communication discipline, I have never really considered HOW I taught them. Since my first “introduction to research methods” class in 2001, I have taught at least one section of a basic or advanced research methods class nearly every semester. As many teachers of such classes have done over the years, I simply uncritically adopted the format used in both of my introductory graduate research methods classes for the first iteration of the course. In subsequent semesters, my teaching has largely (though not wholly) been constrained by the requirements established by a committee at my current institution. Over the years, I introduced a variety of applied and discussion-oriented activities into a class which is historically lecture-based, but other than these minor alterations, I never really considered how I might change the class. In short, I always taught the class in approximately the same way—without ever really considering,

apart from contemplating the limited feedback available via student evaluations, how the students were responding to that class.

Case Study: Methodology

Participants. Thirty-five undergraduate students were recruited through the advanced courses for majors in the department. Thirty-four of the participants had finished taking the research methods class, most within one year of the study; the other was currently enrolled in the class. One of the students was a communication minor and the rest were communication majors. Participants were “traditional” college-age students, with ages ranging from 19 to 22.

Participants signed up for one of six focus groups held in an on-campus classroom in the evening. The number and size of groups is consistent with advice provided by Morgan (1996). Because others did not show up for the groups, the eventual size of the focus groups ranged from four to eight students. One trained student served as the moderator, while another trained student took notes and monitored the process.

Focus groups were conducted in accordance with a protocol (see appendix A), though student moderators were told to deviate from that protocol if they felt it necessary. Focus group time ranged from 30 to 75 minutes, depending on the size and energy of a particular group. All groups were provided with a pizza break during their participation. Finally, after the groups were finished, participants completed a manipulation check questionnaire (see appendix B). Analysis of this questionnaire suggested that students felt free to speak their minds, and that they felt the groups were not dominated by single individuals.

Example: Data Analysis

All six focus groups were transcribed by the student facilitators for course credit. Initially, I had planned to use the first group as a pilot; however, since the pilot group did not differ substantially from the other five groups in process or themes, it was included with the remainder for analysis (similar to procedures employed by Grover & Nangle, 2003).

I began a thematic analysis by reading through each transcript several times, noting initial impressions. Next, I classified themes for individual question responses, counting how often each theme emerged for that question. Also, I began at this point to identify individual representative quotes. Finally, I read through my thematic analysis of the individual items, looking for overarching themes across the six groups. As I developed those themes, I further noted individual quotations which best exemplified those themes. This thematic analysis procedure is consistent with other published research utilizing focus groups, as discussed above (e.g., Press & Cole, 1995). It is also consistent with a constant comparison process, used by qualitative researchers to examine interview transcriptions and other texts (e.g., Baxter & DeGooyer, 2001).

Example: Interpretation

Perhaps the most commonly described theme referred to the "value" of the class; students described the course as rigorous, but appreciated what they gained from it. Students also particularly enjoyed those parts of the course which discussed the physical process of doing research in a library and assessing the quality of a source. Students appreciated writing the semester-long paper, though they did not enjoy it at the time. They felt the paper gave them a good understanding of how to write a literature review and how to organize their time for writing future papers of a similar length.

Students also described several ways in which my course could be improved. In particular, they suggested that the course felt like two separate classes--one focused on writing the paper, and the other emphasizing abstract test-related content. Because of this perceived schism, some students felt that there were too few tests representing too great a percentage of their course grade. Students also felt that the course did not provide sufficient "real-world" application, though they regarded it as a valuable course in preparation for future classes in the major.

As discussed above, I searched through the existing literature to find possible ways to address these students concerns, without compromising the integrity of the class. In the future, I will consider incorporating service learning (Keyton, 2000) into the class, or at least having employees of area businesses talk about the importance of understanding research. The problem-based approach of

Anisfeld (1987) might also be useful. I might experiment with altering the number and value of tests, and more carefully connecting the other course content to the writing of the paper.

Had I not used the focus group methodology, I would not have been aware of the value students place on the library instruction. I had always assumed that students came into the class (as sophomores and juniors) with a good understanding of how to do library research, and that my focus should be on emphasizing how to do communication-specific research. Instead, students in these groups openly mocked the library instruction received in their prior general education classes, and emphasized the importance of the library instruction received in the research methods course. I also would not have been aware that students are justifiably proud of their papers, and use the course as "bragging rights" to impress students from other majors who do not have to complete similarly rigorous research projects.

Conclusion

For me, using the focus groups was challenging and time-consuming. However, that process has forever transformed the way I approach the research methods class. It also has the potential to transform how I approach my teaching as a whole. For example, the comments about providing "real-world" applicability are relevant to many of the other classes I teach. I believe I can do so without sacrificing course content or rigor, simply by finding more carefully structured application exercises. This sort of careful, qualitative analysis has the power to transform the way one approaches teaching, as I find myself considering other ways to assess student reactions through both formative and summative evaluation procedures. Also, students become a greater part of the process--beyond just filling out forms, they can participate more actively in the co-construction of future classes. In the near future, I plan on implementing a similar investigation of the other class I have been teaching for years (persuasion). For instructors who are willing to undertake such efforts, focus groups can provide uniquely valuable information to supplement the traditional evaluation process.

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Appendix A: Focus Group Protocol

- 1) First, please tell us in turn your name, year in school, and concentration; also, could you summarize your experience in SCOM 280 in a sentence or two?
- 2) What is the single most important concept or skill you learned in SCOM 280?
- 3) To what extent, if any, do you feel that SCOM 280 has improved your confidence as a student?
- 4) Do you feel that SCOM 280 should be a required course for majors? (probe) Why or why not?
- 5) How would you compare the rigor of SCOM 280 with other classes?
- 6) How has SCOM 280 helped you with the advanced research classes (if you've taken any)?
- 7) How has SCOM 280 helped you with SCOM 341 (Persuasion) or other upper-level SCOM classes?
- 8) Of the required core classes (280, 242, 240, 245, and the second research class), which is the most valuable? Why? (probe) Which is the LEAST valuable? Why?
- 9) Do you think that SCOM 280 will help you get a job?
- 10) How much do you think SCOM 280 will help you after you get a job or an internship? That is, do you think the skills learned from SCOM 280 are valuable to a future employer?
- 11) If you could teach SCOM 280, what would be the focus of the class?
- 12) What advice would you give to a student getting ready to take SCOM 280?
- 13) How would you feel about SCOM 280 being the "gateway" course for majors, with a required grade of B- or better in order to be admitted to the major (instead of the current system)?
- 14) How would you feel about requiring students to collect and analyze data in SCOM 280, instead of stopping with a "methods" section?
- 15) Is there anything else you would like to add about SCOM 280?

Appendix B: Focus Group Manipulation Check Questionnaire

Thank you for agreeing to participate in our focus group study. Would you mind taking a few minutes to fill out this questionnaire? It asks for your thoughts on the focus group process, and gives you the opportunity to provide additional comments on SCOM 280.

1) Please circle the response which best describes your reaction to various aspects of participating in the focus group.

a) I felt free to speak my mind.

Strongly Agree Agree Neutral Disagree Strongly Disagree

b) I felt that one person dominated the discussion.

Strongly Agree Agree Neutral Disagree Strongly Disagree

c) I felt that the moderator did a good job of encouraging discussion.

Strongly Agree Agree Neutral Disagree Strongly Disagree

d) I felt that the questions asked enabled me to discuss the important aspects of my SCOM 280 experience.

Strongly Agree Agree Neutral Disagree Strongly Disagree

e) Based on this experience, I would be willing to participate in future focus group research.

Strongly Agree Agree Neutral Disagree Strongly Disagree

2) I would like to offer the following suggestions to the focus group researchers:

3) I would like to offer some final thoughts on SCOM 280 which I didn't get a chance to discuss in the group:

Once again, thanks for your time. Your input has been very valuable, and is greatly appreciated.

The Effects of a Classroom Discussion Technique on Student Satisfaction: A Quasi-Experiment

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Abstract

Increasing student satisfaction has many benefits at all levels within higher education; yet the literature reveals few scientifically-tested teaching methods to increase satisfaction. We examine whether a classroom discussion technique increases student satisfaction. This low-tech method to increase classroom discussion may be applied in almost any course. The technique helps create highly personalized lectures relevant to students. Using a quasi-experimental design in two similar courses taught at a medium-sized university, results indicate that increased classroom discussion accomplished via the personalized lecture technique significantly increases student satisfaction. The technique, methods, results, and future research are discussed.

Introduction

Student satisfaction in the classroom is an inherently desirable goal and a benefit of teaching. Satisfaction has practical effects for students as well. While plenty of research exists on the many benefits of student satisfaction, there is less research that identifies and tests the effectiveness of methods instructors may use for increasing satisfaction. In our research, we explore a classroom discussion technique that requires little familiarity with technology and that may be applied to almost any course content. The technique involves two steps that help instructors to personalize lectures to the particular students in each course. We examine whether this technique increases student satisfaction.

Satisfaction

There has been a great deal of research examining the benefits of satisfaction in the college setting. For example, satisfaction has been linked to student performance among college students (Bean and Bradley 1986; Lock 1976; Organ 1977; Schwab and Cummings 1970). Donohue and Wong (1997) argue that satisfaction is highly correlated with achievement motivation among both traditional and non-traditional students. This may be why others have found an association between satisfaction and college student achievement (Centra and Rock 1971; Lavin 1985). Grade point average (GPA) has been linked to student satisfaction (Bentler and Speckart 1979; Fishbein and Ajzen 1975). Student satisfaction has also been examined as a factor contributing to student retention (Spady 1970; Tinto 1975, 1993; Aitken 1982; Astin 1993) and student attrition (Bean 1983; Spady 1970; Tinto 1975, 1993). Satisfaction and academic performance have also been viewed as intervening variables that affect student attrition (Bean 1980, 1983, 1985; Pascarella 1980; Spady 1970; Tinto 1975).

Apart from the academic benefits outlined above, satisfaction has also been correlated with students' progress in their intellectual and social development (Pace 1984). Scholars have argued that satisfaction is a key psychological-affective outcome, which in turn leads to a direct measure of success in college (Astin 1977; 1993). Student satisfaction in older students has been shown to be related to creating a learner-centered approach (Miglietti and Strange 1998). Many program evaluations include measures of student satisfaction because of knowledge relating to its practical benefits, though much of

the knowledge regarding satisfaction comes from earlier studies during the late 1960s and early 1970s (e.g., Betz, Klingensmith, and Menne 1970; Pervin 1967; Schmidt and Sedlacek 1972).

Satisfaction has also been linked to the institutional culture of the university. Cultures that value and build community are more likely to have higher student satisfaction rates (Kuh 2001-2002).

While contributing to satisfaction among students may be one desirable consequence of teaching, research on factors available in the classroom to increase satisfaction are limited. Some studies have explored how grade performance relates to satisfaction (Lui and Jung 1980; Siegel and Bowen 1971), but less information is available in terms of specific techniques instructors may use to increase student satisfaction. Even if it were found that better grades lead to higher satisfaction, it is not ethical to inflate student grades to attempt to achieve more satisfied students in one's class.

Lectures and Student Satisfaction

There are different instructional methods that are linked to variations in the level of student satisfaction (Kellum, Carr, and Dozier 2001; Ostiguy and Haffer 2002). Lecture styles may differ in how they facilitate learning. According to Bailey and Lagdana (1997), faculty performance and lectures play a large part in student satisfaction. For example, both an instructor's knowledge of the subject matter and teaching ability have been shown to affect satisfaction (Aitken 1982; Hearn 1985; Metzner and Bean 1987). In fact, course stimulation and faculty teaching ability have been shown to be stronger predictors of overall departmental satisfaction than social support (Hearn 1985). According to Liegler (1997), some factors external to the classroom also affect student satisfaction, such as the students' background or pre-enrollment characteristics, college facilities and services, academic integration, and social integration. The available literature on satisfaction rarely addresses endogenous classroom factors that impact student satisfaction.

Classroom Discussion

Increasing classroom discussion has popularity among both instructors and students, and is often viewed as a positive trait in a class format. This is because there are many benefits associated with increased classroom discussion. Goodman (1995) posits that discussion in the classroom helps teach

students about cultural diversity. Academic benefits are associated with the presence of discussion in the classroom. Burchfield and Sappington (1999) argue that discussion in the classroom is important enough that it should be portrayed to students as a critical element in success. VanDeWeghe (2005) argues that discussion plays a critical role in students' literacy development. Voelkl's (1995) work found that participation in discussion is closely linked to course grades, a variable related to student satisfaction. Others (e.g., Hutchinson & Beadle, 1992) have found that students who did not participate in discussions in class were at a disadvantage relative to those who did.

If student satisfaction has many benefits for college students, and if lecture styles may play a part in student satisfaction, then it is worthwhile to examine an existing lecture tool which may be adopted in any subject. If this tool increases student satisfaction, the value of that tool increases and it is worth studying and outlining for the academic community.

A low-tech teaching technique exists for increasing classroom discussion (Nath and Anderson 2006). This technique works by bringing students' unique and personal beliefs, attitudes, and experiences into the classroom for discussion. In this paper, we outline the classroom discussion technique and test whether its effects on discussion are associated with student satisfaction levels as well.

Method

Personalized Lecture Technique. The technique is adopted by Nath and Anderson (2006). It involves two steps and is used to increase discussion in the classroom. Instructors integrate student responses to an anonymous survey administered at the beginning of the course into relevant course lectures throughout the semester. The technique itself is low-tech, though it can just as easily be used in the more technologically advanced classroom as in the more traditional blackboard-only classroom. It does not require knowledge of PowerPoint or use of pointers or remote "clickers," although it can be argued that the effect may be similar to parts of what is achieved through the use of "clickers."

The first step in the technique is to give an anonymous survey to students within the first week of the semester. The survey should ask students questions regarding their opinions, attitudes, and experiences related to general and specific course material. The second step of the technique involves incorporating student responses to specific questions into relevant lectures over the course of the

semester. Students therefore can see where they stand in relation to other students in opinions related to a topic. This has two benefits: (1) it provides students with an opportunity to express any previous experience with the course material; and (2) the data drawn anonymously from these surveys links the students' own unique experiences to course material.

For example, in one political science class, the instructor surveyed his students on their opinions, attitudes, and experiences related to various topics in political science. When a particular topic such as values, voting, or media was scheduled to be the lecture of the day, the instructor presented student responses to these issues:

- Opinions on the topic of values: "Which of the following three values (democracy, liberty, equality) do you think is most important?"
- Attitudes towards voting issues: Do you agree that "only people who are informed about the issues should vote?"
- Experiences with media: "Where do you get most of your news from?"

As the instructor discussed the topic, he would pause to reveal student responses on the relevant questions and then open the floor up for discussion.

The Experiment

Using a quasi-experimental design, we examined the effects of increased discussion via personalized lectures on course satisfaction. We accomplished the treatment in the experiment by applying step one (conducting the survey) of the teaching technique in two similar sociology social problem courses at a Midwestern state university. We applied step two (revealing results of the survey) to only one class, making that class the treated class.

We measured discussion and student satisfaction by administering a second survey to both classes at the end of the semester. We defined *discussion level* as the degree to which students felt comfortable speaking up in the course as well as the degree of course discussion they experienced compared to other courses in which they were also enrolled. We defined *satisfaction* as the degree to which students had a positive affective orientation towards the class experience.

We hypothesized that the class with higher discussion would have significantly higher student satisfaction than the class without higher discussion.

Results

Measurement Reliability. Using a six-point Likert scale from 1=strongly disagree to 6=strongly agree, the following statements were used to assess discussion:

1. "I felt comfortable speaking up in this class."
2. "This course included very little classroom discussion" (reverse coded).
3. "Students spoke up in class and shared their views about the topics" ($\alpha=.50$).

Using the same Likert scale, students were asked to state their level of agreement with these four statements of satisfaction:

1. "I consider this class rather unpleasant" (reverse coded for analyses).
2. "I feel satisfied with this class."
3. "Most of the time, I have to force myself to go to this class" (reverse coded for analyses).
4. "I feel that I am happier in this class than most of my friends are in their classes" ($\alpha=.65$).

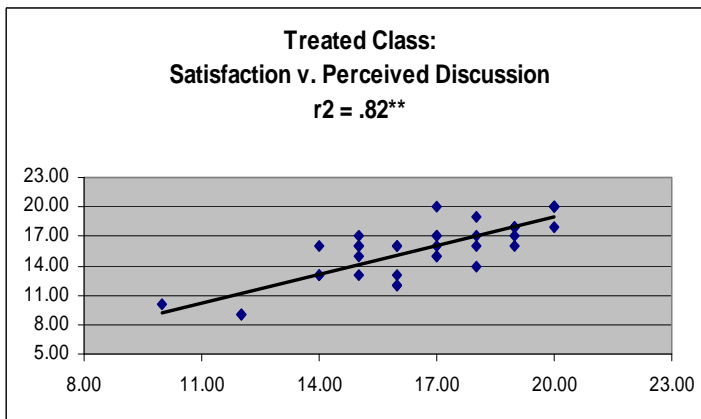
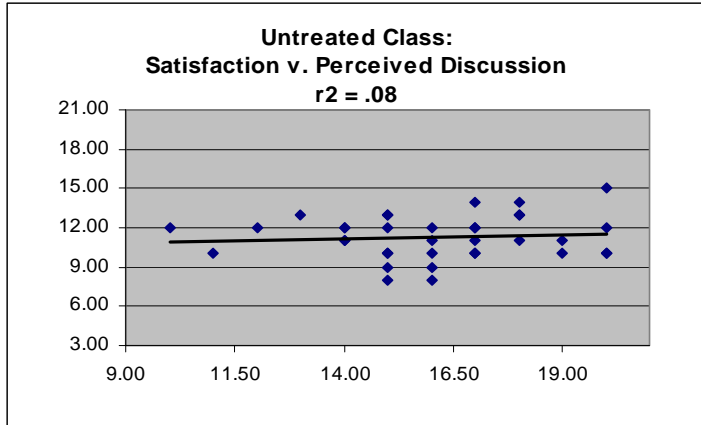
Regression. Regression analyses examined the relationship between discussion and student satisfaction within each course. Results supported our hypothesis. That is, students were significantly more satisfied with discussion in the class treated with the teaching technique ($B = .58, p < .01$) than students in the non-treatment course ($B = .13, p = .62$). In other words, the discussion technique, when used, raises the satisfaction level of students in that class. See Table 1 for detailed regression results, and Table 2 which depicts charts of the differing r^2 values for each class.

Table 1
Discussion on satisfaction separated by class

Independent Variable	Treated Class Satisfaction (N = 37)	Untreated Class Satisfaction (N = 36)
Constant	9.31 (2.20)	14.64 (2.91)
Discussion	.58** (.17)	.13 (.26)

Note: Standard errors are in parentheses; * $p < .05$; ** $p < .01$, *** $p < .001$.

Table 2
Visual line graphs of each class' r-square



Discussion and Conclusion

There is a substantial literature on factors that impact student satisfaction, but too much of this research explores factors that are exogenous to the classroom—and out of the instructor’s control. Instructors can have an impact on creating student satisfaction, and this study explored one method that can be used to accomplish this goal. This project was an attempt to examine a classroom discussion technique to see if it also increased student satisfaction. Regression analyses revealed that when this classroom discussion technique was used, the students in that class were significantly more satisfied than students in the class that did not use the technique. Creating personalized lectures through the incorporation of opinions, experiences, and attitudes of the particular students in the class in question shows that instructors have the tools to increase student satisfaction in almost any class.

This research also opens up a new research question related to the relationship between increased discussion in general (i.e., using some other technique) and student satisfaction. It may be that

students in our study were more satisfied because the discussion not only revolved around the course topic, but also focused on the actual students' particular opinions, attitudes, and experiences instead of focusing on generalizations.

There are limits to our research as well. Because of the quasi-nature of the experiment, there may have been other factors present to create the effect. Therefore, further research in the form of replication may be helpful. Replication in other subject areas, or in the same course but across a new semester, would be beneficial.

Another related area worth investigating relates to student retention. Elliot and Healy (2001) and Elliott (2002-3) note how instructional effectiveness directly impacts student satisfaction and retention. If the personalized lecture technique is measured as a more effective instructional method, this would help explain increases in student satisfaction. Another area for future research is to compare retention rates among two cohorts of students, one that has had numerous classes with the personalized lecture technique, and one that has not. This could be accomplished using students in learning communities within one or more universities.

In addition, further research could examine the effects of increased discussion by using this technique on other important dependent variables such as course commitment, perceived relevance of course material, and various measures of learning.

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**Mining Our Experiences:
Reflecting on the Subtle Interpersonal Dimension of Teaching and Learning**

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Abstract

Although the past decade has seen increased attention directed to technology and technical aspects of instruction, we focus here on suggestions related to interpersonal dimensions of teaching and learning. In the form of a relational checklist, thirteen specific points are raised. These tips can be used to help instructors to attend to the often subtle human components of professional practice. The suggestions raised include (a) exposing your own learning needs, (b) offering responsibility to students, (c) seeking out positive humor, (d) delighting in your own contradictions, (e) revisiting stories, and (f) sharing the whys of the various teaching strategies that you use.

More than once, we have cringed, but remained silent while advice about better use of instructional technologies, rethinking evaluation criteria, or the relevancy of specific curricula were discussed, even though the real problem or concern was the relationship between the professor and the students at the interpersonal level. The face-to-face interaction between professor and students is at the heart of pedagogical experience, but is readily denied as the source of a problem or a reason for intervention. Efforts to aid a struggling teacher in dealing with this dimension of teaching (either as self-reflection and/or with colleagues) is, at best, awkward and comical, and at worst, counter-productive. For that matter, even if a professor is not struggling, regular perception checks concerning one's manner as a human being with other human beings is a healthy practice. It is an erroneous but common assumption that one's personality, or one's personal and interactive teaching style, is an immutable given.

The goal here is to acknowledge the interpersonal qualities of teaching, and to consider the subtle and perhaps more obvious strategies that can be used to enhance a productive classroom learning environment. Interpersonal relations are pivotal to the classroom ambiance. Bruce Wilshire (1991), in his thoughtful examination of "the educating act," wrote:

all sharply focusing professional consciousness runs the risk of being a constructed awareness which conceals from itself portions of *ourselves with others*, and *ourselves and the background*, which solicit us. It risks boxing itself in the mirror-lined container of ego. Hegel spoke aptly of history happening behind our backs. (p. 29, original emphasis)

Certainly, we, as lecturing and seminar discussion-minded professors, can remember moments when our egos, in their short-sighted ways, lost track of the "other;" a faux pas of interpersonal sensitivity occurred, and we were doomed for a while to an emerging history of behind-our-back discussions. Why should we care? As long as the content material of the day is covered, what does pandering to the personhood of the students get us...or them? We have learned to care greatly about our own personhood and those of the students with whom we work. For what we get in an arrangement that is attentive to interpersonal factors is a classroom ambiance without (significant) dialogic barriers, hostile relations, and behind-our-back happenings. In a positive vein, what one can strive for is classroom equanimity most conducive to the students and to one's style, the subject, and the educating act.

The following checklist is meant to capture ideas for recognition and principles of conduct that

may help one to attend to interpersonal elements both for one's own teaching and for those annoying moments when you are certain that the wrong advice is being given: for example, when one is being encouraged to change from the overhead projector to PowerPoint, when the reality of necessary changes would deal with the classroom interpersonal ambiance. Perhaps this listing of principles in the form of a relational checklist may offer points of entry to address the readily denied interpersonal realities of teaching.

Expose your own learning needs, flaws, and present state of being as it may be influencing the moment. When you have just learned something new in class, let the students know. When you are confused with some theme in the discussion, announce your confusion. When you are excited by the topic or events or when you are less excited for various reasons, allow it to be evident. React to your spelling blunders, forgetfulness, or other personal foibles in a way that cries out, "this is me." In short, we are human. It is important, therefore, to appear so. This humanness is part of our responsibility. Mary Catherine Bateson (1994) offered a story in this regard:

When I first became a dean, I admired the campus skating rink and started talking about learning to skate, but helpful faculty friends argued that as dean I could not afford to let colleagues see me in the inevitable comic falls. (p. 69)

We conclude, as did Mary Catherine Bateson, that the falls are worth it. Bateson stated, "Given a choice, few will choose the reversal of status that is involved in being ignorant and being a learner, unless there is a significant gain of intimacy or respect in the new learning" (p. 69). We maintain the necessary respect and degree of intimacy needed to draw out a person to dialogue is worth the odd comic fall. What a treat to have fun with who we are rather than being horrified.

Offer some responsibility for the course to students. Students too easily have learned to hide behind courses. By this we mean that some students consciously and intentionally avoid all responsibility. This is manifested in a keenness to remain anonymous, to deem the course an evaluation exercise rather than a learning experience, and to be generally passive in the affairs of learning. It has become a bit of a buzz phrase to suggest that students should be more responsible for their own learning. At its face, this

seems like a wonderful approach that respects the adult learner; yet it is far more complex. Most educators that we have encountered are enamored with the idea of increased responsibility among students. They tend not to be as keen on this idea's flipside: granting more freedom to students, or put another way, relinquishing total control as professor. For students to be truly responsible, they must be given authentic choices. They have to have the chance to make decisions with which we may disagree. A couple of ways we have tried to offer influence to students are (a) by giving them input into the subject matter to be included, and (b) by allowing them to negotiate how they will be evaluated. This sounds easy enough, but it is not so simple. From our experience, these are delicate matters for all to handle. Students need guidance toward more responsibility (usually greatly valued by the more serious, sincere students). And colleagues need to know that we are not inspiring campus-wide student revolutions. One of us has been accused of stirring up trouble by giving students the above two options. "Us against them," we believe, was the intended message to be "taken under advisement."

As you approach change, start where the learners are. When negotiating class evaluations, creating novel classroom assignments and activities, or when offering a new class structure and format, be aware of the students' entry points, developmental level, and learning history (to the extent that it is possible). This is not to say teach only to where the students are, but rather acknowledge that radical change to their contextualized students' ways of knowing can be introduced gradually and in developmentally appropriate ways to avoid the shock of change. There may be times when baptism by fire is the most effective teaching strategy. Yet, in our own excitement to cultivate new paths and expand students' horizons, we have, in certain cases, gone too far, too fast. For example, one useful model that may be helpful in this capacity is Perry's (1970) Stages of Intellectual Development. Particularly when we attempt to expose students to new paradigms, to critical thinking, and to seeing multiple points of view, it is important to consider if they are seeing the world in black and white terms (Stage 1), believing that every idea is as good as the next (Stage 2), or if they are moving toward responsible knowing in a discipline-specific (Stage 3) or multi-disciplinary way (Stage 4). If students are in Stage 1, we may work to move them along the developmental trajectory over time, but we should acknowledge and accept that we will not easily progress to Stage 4. Of course, as teachers, we need to be ever-reflective on our own positioning

within the conceptual models that we employ. Another example would be the keenness to negotiate evaluation criteria with a class of intimidated first-year students. Perhaps this place is not the best setting. We actively pursue change from the conventional teacher/lecture-centered approach to a more multi-faceted approach to teaching strategies--and, thus, to a more lively student-centered approach overall. We regularly find, however, that we must temper our personal enthusiasm for progressive approaches to return closer to where the students are.

Seek out positive humor. One variety of bringing levity to the classroom is the use of self-effacing humor. Part of successful interpersonal relations depends on breaking down the stereotypes of the omnipotent or omniscient professor. By poking fun at ourselves, we forge more equal relations with students by dismantling some of our power in the spirit of a richer more intriguing humility. Simple statements such as “we are all learning together” or “I want you to see me as the senior member, but as an equal” may be cast aside by students. Years of socialization into the cultures of classrooms may bring about well-founded doubts. And perhaps nothing is worse than not delivering with such intentions for a co-investigative/mutuality based, student-centered model. In short, if we don’t do what we advocate, we become the joke. This is *not* the *positive* humor we seek, although noting to the class when we stray from a certain advocacy position can ease a humiliation toward a humbling human gesture. By laughing at ourselves, we can become more credible.

A corollary of warning may be in order. Poking fun at students rarely, if ever, builds the positive spirit in the classroom that we are discussing. We have found that even when an individual student seems to enjoy such joking, other students often feel that one of them has been attacked and they cannot be sure who might be the next target. One of us suffers from a sarcastic sense of humor and has learned that it is best checked at the classroom door. The other one of us must check an over-developed **self**-parody that is too readily extended to others. We try to remember that there is a balance here.

Finding humor in life, in our respective disciplines, and in the issues of the day, while rejoicing in the ironies and smiles that appear when we look for them, is an excellent way to warm the environment. Thinking of classroom ambience, it may add a useful touch of humility to consider the following: “Laughter is our reminder that our theories are an attempt to make existence intelligible, but necessarily only an

attempt, and does not the irrational, the instinctive burst in to keep the balance true by laughter” (Whitehead 1956, p. 55).

Delight in your own contradictions. Sometimes it is seductive to attempt to present ourselves as internally consistent, wholly rational beings. To break down barriers, to promote critical thinking, and perhaps to approximate something more authentic, it may be best to remind everyone that contradictions are major opportunities for learning. It was Whitman who said, “Oh, let me be a man of contradictions.” Or was it Whitman who said, “Contradiction is the site of all learning.” (The fact that we have retained a collection of contradiction quotes over time should in no way be conceived as an indication of any predisposition in this regard). Students thrive on spotting professors’ contradictions, too often in a vindictive manner. Why not embrace them as a site of powerful learning and challenge the class, in a playful Socratic manner, to extend the detection game to all. The key is that we have to be the quarterbacks of this one. One year in an environmental inquiry course, I (Bob) had the class join me at my home for a house inspector to do an environmental audit of my home. The environmental professor fully exposed, so to speak. Yes, contradictions abounded, but such learning occurred. After that audit, class dialogue concerning personal lifestyles and environmental initiative picked up briskly. Contradiction became sites of learning for all.

Talk with students, not over them. How does one manage to find the appropriate level and manner to engage students without perpetuating a hierarchy? There is true subtlety in any answer. As the number of years between our ages and those of the students grows, sometimes the challenge to stay “on their level” (or even close enough to be relevant) seems to increase as well. And to embrace a contradiction, sometimes it gets easier as we don’t feel as compelled to show our knowledge or to demonstrate that we deserve the PhDs we had recently earned; these insecurities can detonate other efforts to build interpersonal bridges. Considering physical factors of the classroom and oneself may be helpful in this effort. We have found that lecterns and tables can have interesting effects. When the classroom architecture permits, sitting with students can help to establish the sense that we are talking together. But mostly, not talking over students’ heads is a matter of language: body language, dialectic, intellectual discourse...oops...oral language, and spatial/mood language. As we have found ourselves distanced from

the days when we watched many of the same movies and listened to much of the same music as students, we have learned to poke fun at our *so not hip* middle-agedness. One of us can pinpoint the day when it was clear that he was no longer of the same generation as the students: making a reference to a film he had seen in the theatre that weekend and noticing the utter lack of recognition, he learned that the only other person in the reasonably large lecture hall who had seen The Story of Us, was a mature student approximately equal in years to the instructor. Sadly, Woody Allen and Bruce Springsteen are no longer shared favorites, but historical figures. Common ground can be built with respect and compassion when our iPods have little in common.

Respond to the positive more than the negative. We have heard this rule of thumb referred to as “reinforce the right thing at the right time.” Others talk about catching people in the act of doing what they are supposed to do. Not only can this approach curb or pre-empt discipline problems, but the more frequent flow of positive energy from the instructor also builds connections among people. John Wooden, the legendary basketball coach, advocated praising the individual and correcting the group. This can add to positive energy and take the potential sting off of negative feedback. A related and often-quoted management principle is to provide four or five positive comments for every negative remark. Given our professorial predilection for correcting, it is a challenge to have 80% of our communication be praise and acknowledgment.

Know your students by name as early as possible. This one (as some of the other thoughts may be) is not novel. It is, however, an objective that is clearly worth the effort. Many variations on using photographs of class members can be helpful in this regard. For some, names come easily; for others, it requires great time and effort to put names to faces. We submit that the dividends justify the investment. Whereas some methods of connecting with students take considerable creativity and thought, knowing students by name may be equally effective in building interpersonal bridges. We take great pride in learning a roomful of students’ names on the first day of class and addressing students as individuals at the first opportunity. The rapport seems to grow instantly. The power of knowing students may increase simply because of its scarcity in the students’ experiences. On a mid-term evaluation, one third-year

student wrote, “you are the first professor that has known my name.” In the large faceless university, knowledge of a name can be a significant and positive force in students’ learning. Similarly, if knowing names is impossible by circumstance, then ask for names and acknowledge that it is important to all and we will work at it together. The message here is that we, as a class, care about ourselves as a classroom full of human beings. When a name is known at the outset or early along the way, the fun in noting the students’ surprise (and delight) makes this checklist item worth the extra effort. Just this year one of us overheard a student rating one professor against another. Her criteria: “This one professor knows my name in the first class (class size 40) this other professor didn’t have a clue months in. Come on, a little effort please.” Hmm, a little thing, but a big impact.

Make your first class exemplary of the expectation for the whole. Is there an educational idea more robust than the notion of primacy? If an uninterrupted stream of teacher talk dominates the first session, stark silence may follow one’s attempt to have a discussion in a second session. Learned from painful mistakes, a maxim that might be put forth is “Don’t lecture the first class and then expect discussions to follow readily in the future.” One might consider devoting the entire first session (or more) to forging a classroom community, *the* classroom community, that is to be exemplary (Schmier, 1996).

Make overheads/slides available to students. With the advent of technologies like Blackboard and WebCT, there is greater technical ease in the classroom and a welcomed decrease in photocopying, but some explanation is needed here. If you want to facilitate students’ focus on discussion and listening, then it may be helpful to provide notes/slides to students electronically or as class handouts. Students appreciate avoiding the situation where they feel they have to think, write, listen, and discuss at the same time. Students’ expectations around the timing, quality, and availability of such notes seem to have increased each year. If their expectations are managed or met, it can increase the student-teacher connection. A caveat here is that we distinguish what goes on overheads/slides from what students should be reading for class. Lecturing the same content as students have been asked to read for class is a teacher behavior that encourages irresponsible learner behavior (Browne & Keeley, 1994). And another caveat: expand beyond the material that you provide. If the visuals represent the bulk of the content and

are provided, students may opt for more engaging out-of-class activities; it is important to add both additional materials and interactions that enhance the classroom learning over getting the notes.

Acknowledge that certain students tend to serve as classroom barometers. Often one or more students are particularly good indicators about what is happening with the whole class. Try assigning this role. It can be fun. It will likely take several weeks before the student barometer becomes readily apparent. Furthermore, other methods of taking the classroom temperature (are we mixing our weather metaphors?) by eliciting students' feedback, such as via the "one-minute paper" and other classroom assessment techniques (Angelo & Cross, 1993), show students that we care about how they are experiencing our course.

Revisit certain stories. Shared stories can serve as an in-class common language. It can develop a sense of clubness, having something special together that will be memorable, fun (note the frequency of this sly little word within this checklist), and most important, will foster learning. For example, on the first day of one course, a story was presented that became a touchstone for the course. By going back to it as new layers of meaning emerged, a sense of cohesiveness grew as class members had bonds of connections back to this story. Recalling a story can have the same benefit as a comedian's "call back" (restating a punch line used earlier in the performance). For example, an improvisational theatre exercise that was used as a mixer on the first day of a class resulted in several shared stories and punch lines. The mention of those mutually-held experiences throughout the term, by both teacher and students, created mirthful moments of bonding.

Share the "why's" of the various teaching strategies that you use. Some of the assessments of our teaching that we use (Critical Incident Questionnaire, Brookfield, 1995) reveal consistently that some students prefer different modes or teaching strategies. By making this fact explicit and by giving reasons for different approaches, students are more likely to understand and to welcome the variety. An interesting example (which perhaps needs an explanation) is the strategy of using a timer set at fifteen minute maximums. Why? To control the tendency to talk *too* long without some pause or activity. Another

example, this time on the macro level, is when following an experimental or specific course format, use the idea of a certain theorist. One of us uses Alfred North Whitehead's (1929) notions of rhythms of education, moving students through a cycle of romance with content, precision with content, and generalization out into a broader application/investigation with the content, which then returns the class back to new romance. Students, as they should expect to be, are confused by the difference of the nature of romance that begins the cycle. Confusion is an inherent part of the cycle. It is inappropriate, we suggest, for professors to be the sole bearers of the theory from which they are teaching. Bringing students on board allows them the ownership and possible commitment to the theory in use. Better still, they can then help keep the theory on track.

The spirit here is not to be like us: dutiful and attentive and wise to the interpersonal, both subtle and obvious, and natural at it to boot. Far from it. We are comfortable talking about all of the above from our past experiences of despair. Like most things, diligent learning and repeated practice are required to develop skills toward which we might be working. This component, the interpersonal component, is not a matter of being a good guy or a natural. It is a self-reflective commitment to a skill in authentic communication and respect for others. It involves valuing a dimension of teaching and learning that is not necessarily self-evident. It is hard work and a rewarding part of the job. As has been highlighted, this relational checklist can help put fun into the teaching equation. When September beckons with enthusiasm and a healthy apprehension, we are reminded of Bruce Wilshire's (1991) haunting possibility, "What if in all our knowing we fail to grasp ourselves [and our students]?" (p. 31).

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Student Perceptions of the Integration of Early Clinical Experiences and Coursework:

A Pilot Investigation

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Abstract

The current study examines student perceptions of the implementation of integrated curriculum in a teacher education program as well as their understanding of a common framework. Qualitative analyses were conducted on data from focus groups and student writings. The integrated curriculum program was viewed positively by the teacher candidates. Data analysis indicates the students were able to see connections among various areas of course content in a different manner than in previous coursework. A more in-depth understanding of a grounding model was also achieved by the students. The authors recommend further research into the potential benefits of integrated curriculum models.

Introduction

The essence of schooling is teaching and the resultant learning. This importance cannot be overstated. In recent years, the work of higher education has benefited from increased reflection on the quality of the teaching and learning that occurs. The importance of this reflection is reflected in growth of the scholarship of teaching and learning activities. Currently there is an increased scrutiny of higher education from others (National Commission on Accountability in Higher Education, 2005). This increased scrutiny provides the imperative for faculty to evaluate our own work and articulate our own views of teaching and learning. A corollary of this focus on accountability is a closer examination of the most effective practices in higher education (Byrne, 2006; Schray, 2006; Shulman, 2002) and the resultant examination of student outcomes. Integrated curriculum is one such promising instructional practice that warrants further examination.

Student perception data is one lens through which members of the higher education teaching community can view the process and outcomes of any instructional innovation. Research examining student perceptions has addressed many different contexts, such as on-line course delivery, goal structure and classroom environment, classroom organization and participation, and the impact of classroom diversity on educational outcomes (Cramer, Collins, Snider, & Fawcett, 2006; Lyke & Kelaher-Young, 2006; Meacham, McClellan, Pearse, & Greene, 2003; O'Malley, 1999; Weaver & Qi, 2005). Therefore, the need to research student perceptions regarding an instructional strategy such as integrated curriculum is an important undertaking which can inform future research and is relevant to other disciplines.

Curriculum Integration

Integrated curriculum definitions have been proposed by many (Harvey & Reid, 2001; Huber & Hutchings, 2004; Kysilka, 1998; Lake, 1994; Percival & Black, 2000) with some overlap in conceptualization as well as much diversity in the definitions. In a review of the literature on integrated curriculum, Lake (1994) notes the following aspects of integrated curriculum: (a) a combination of subjects, (b) an emphasis on projects, (c) sources that go beyond textbooks, (d) relationships among concepts, (e) thematic units as organizing principles, (f) flexible schedules, and (g) flexible student groupings (p. 2).

Curriculum integration models. Fogarty (1991) describes several models of curriculum integration which differ in the nature of connections among topics or disciplines. When curriculum is integrated as *connected*, topics within one discipline are purposefully aligned. When implementing a connected integrated curriculum, review and reconceptualization allow students to put various “big ideas” together in a meaningful way. The next level of integration is *nested curriculum*, which lays different arenas of learning onto a given subject. *Sequenced curriculum*, as a level of integrated curriculum, involves the teaching of given concepts in a sequenced manner from different subject areas. *Shared curriculum*, similar to sequenced curriculum, involves cross-discipline curriculum with more shared concepts across the disciplines. Fogarty delineates *webbed curriculum* as a level above shared curriculum. Webbed curriculum involves thematic connections between multiple disciplines. The next level of integration, labeled *threaded curriculum*, involves the purposeful weaving of arenas of learning, through various disciplines. *Integration*, Fogarty’s term for another type of curriculum planning, overlaps concepts, skills and dispositions of multiple disciplines. *Immersed curriculum* centers on the learner using a given “lens” to view multiple disciplines. Finally, the highest level of integration is *networked*, wherein the learner also directs the crossover of disciplines through direction of resources. Figure 1 graphically represents these levels of curriculum integration.

Curriculum integration in higher education. Kysilka (1998) notes that integrated curriculum at the university level, “means whatever someone decides it means, as long as there is a ‘connection’ between previously separated content areas and/or skill areas” (p. 198). The topic of curriculum integration appears in the higher education literature in all iterations of Fogarty’s continuum (1991). Most reports detail programs that would be identified as “connected” curriculum integration wherein ideas within particular content areas are related (Bristor, Pelaez, & Crawley, 2000; Dinan, 2002). The literature on curriculum integration in higher education suggests there may be positive results for student learning across many disciplines (Craft & Mack, 2001; Wilkinson & Scofield, 2002; Zellner, Boerst, & Semling, 2003). Shapiro (2003) notes, in his description of a case study in curricular revision, the emergence of, “a core structure consisting of multiple, concrete activities that promote ongoing thinking through the curriculum...with four major interdependent components” (p. 432) which are an entry level course, a capstone experience, organized and related learning activities throughout the program and writing

throughout the program. Descriptive accounts of integrated curriculum programs come from a variety of disciplines within higher education (Drake, 1998; Harden, 2001; Kokkala & Gessell, 2002-2003; Zellner, et al., 2003) but provide little empirical evidence of the effects of this innovation.

Need for Curriculum Integration

The integration of curriculum content, (e.g., reading and math) as applied to K-12 classrooms is discussed in coursework for pre-service teachers; however, there is no common demonstration of this practice for pre-service teachers. The discussion of curriculum integration applies to all programs in higher education as Huber and Hutchings (2004) note, "Learning that helps develop integrative capacities is important because it builds habits of mind that prepare students to make informed judgments in the conduct of person, professional, and civic life..." (pg. 1). Curriculum integration is also a promising practice for higher education due to the potential for increased knowledge and skill development for graduates (Drake, 1998; Halpern & Hakel, 2003; Huber & Hutchings, 2004).

Limited research has been reported in the area of integrated curriculum in higher education and teacher preparation in particular. The current study is intended to add to the research in this area. The research was conducted with pre-service teacher education majors but the findings can be considered as a basis for further research for other higher education programs. The purpose of this exploratory investigation is to answer the following research question: What are students' perceptions of the integration of multiple courses and early field experiences in a pre-service teacher education curriculum? A secondary purpose of this exploratory study is to assess the impact of curriculum integration on the development of pre-service teachers' conceptions of teaching.

Method

The current study was designed to analyze students' perceptions of an integrated curriculum program and the impact of integrated curriculum on the development of pre-service teachers. A case study approach was used providing an intensive look at one example of a pre-service integrated curriculum program (Bogdan & Biklen, 2003; Creswell, 1998).

Program Description

This program was developed to maximize pre-service teacher learning through several interventions. When conceptualized, the content of the multiple courses was integrated and a co-teaching model for delivery of the courses was planned. The three courses that comprised the integrated curriculum were an individualized curriculum development course, an instructional strategies course, and a field work course with associated practicum in a school. The curriculum course included the knowledge and skills that support the development of curriculum to meet individual student needs, including non-academic curriculum domains such as leisure and vocational areas. The instructional strategies course included behavior intervention strategies such as prompting hierarchies and consequence interventions in an instructional environment. The field work course included knowledge and skills related to implementation of instructional plans and reflection on teaching. The curriculum development course was a six credit hour course, the instructional strategy course was a three credit hour course, and the field work course was a four credit hour course. The integrated curriculum was delivered in a blocked schedule of six hours per day for two days per week. Students were also enrolled in a clinical classroom placement two full days per week. This program differed from more common module approaches in that the content of courses were woven together throughout the semester rather than presented as isolated units. The integrated curriculum program occurred within the second semester of the students' junior year and was the first of three semesters in which students had clinical placements.

The Cognition of Teaching model. The description Shapiro (2003) provides of a "core structure" reflects the intent of our integrated curriculum program. We utilized a graphic representation of teaching as the center, or core structure, of these three courses (see Figure 2). The Cognition of Teaching model was developed primarily by clinical faculty in our teacher education program, and had been previously utilized during students' senior year. The model was developed as a way to assist students in understanding the relationships among key aspects of teaching. These key aspects are typically taught in separate courses, sometimes in separate semesters. This graphic representation of teaching indicates the relationships among assessment, curriculum development, and instruction, as well as the centrality of the student to these teaching activities. The model suggests that teaching involves engaging in these key aspects on an ongoing basis, and that each of these key aspects influences other key aspects. For

example, the curriculum for a student, or what the student is expected to learn, influences how a teacher assesses the student. Ongoing assessment data on that learning may influence changes in the instructional strategies a teacher utilizes. In addition to illustrating the relationship among assessment, instruction, and curriculum development, the model reflects the influence of guiding principals such as reflective practice, collaboration, self-determination, and decision-making on those key aspects.

The integration of the courses in this project was based on the Cognition of Teaching model, and the course content was related to the model throughout the semester. The curriculum integration of this program and utilization of the Cognition of Teaching model reflected aspects of Fogarty's (1991) shared model of curriculum integration as well as aspects of webbed integration (see Figure 1). The Cognition of Teaching Model served as a theme for all three courses, a feature of Fogarty's webbed curriculum. The team planning that brought the content of the three courses into some common forms is reflective of Fogarty's shared curriculum model. As co-instructors we designed the program using the learning standards and core concepts addressed in the three courses. The Cognition of Teaching model was used to identify connections between concepts and practices typically addressed in separate courses, as well as to identify opportunities to connect course content to clinical experiences (shared curriculum integration).

For example, the collection of assessment data for use in both developing curriculum and in designing instruction was taught in relation to curriculum development standards (determining individual student priorities), instructional strategies standards (what current skills were demonstrated by students) and practicum standards (what impact did a particular lesson have for the learners). Students applied the data collection skills for curriculum development and instructional design within their school sites as a part of the practicum course. In a non-integrated model, students would apply assessment strategies to instruction and curriculum development in two separate courses, possibly with separate instructors, without receiving explicit and ongoing support in identifying and understanding the relationships among these components.

The Cognition of Teaching model was also used as the center of other concepts taught (demonstrating Fogarty's webbed curriculum). The connections between development of curriculum and instruction, as evinced in the model, were overtly recognized and emphasized during course time through

use of the Cognition of Teaching model. Then, after practice in clinical settings, the students would bring these applications back to the course for discussion and reflection. Continual checking of the understanding of the assessment-curriculum development-instruction relationships determined student development. For example, when a practice was introduced or discussed, students might be asked to reflect on where the practice is reflected in the model, and how that practice might influence or be influenced by other components of the model. In other words, practices typically associated with a single course were rarely presented in isolation but rather in the context of the model and the overall practice of teaching. In non-integrated delivery, there would likely be less purposeful and less frequent discussion of the connections between these core concepts, which would be presented in separate courses.

For example, during instruction on the principle of self-determination, connections to practice in assessment, curriculum development, and instruction were discussed in class. Students then implemented some of these practices through course projects in their clinical settings. Participants' assessment practices included collecting data on students' interests, preferences, and goals. They then used the data to identify appropriate instructional strategies that were implemented in the clinical setting. Participants also completed curriculum projects that included educational priorities related to developing self-determination skills based on the assessment data, and their instructional projects may have included self-instruction and self-management strategies (components of self-determination). After implementing these practices in clinical settings, course discussions were facilitated to guide students in reflecting upon current and future implementation issues related to promoting self-determination. In a more traditional model, the principle of self-determination would have been emphasized in the curriculum development course, with less support for understanding how self-determination can be facilitated through methods of assessment and instruction.

Participants

In the semester in which this study was conducted, there were three sections of each course offered. For each of the courses, one section was designated as the section that would participate in the integrated curriculum program. A total of 83 students were approved for registration in the courses. After students were provided with initial information on the integrated curriculum program, 27 of the eligible students were randomly selected to enroll in the integrated curriculum program section. Random

assignment was accomplished by selecting every third student on the list of eligible students to this course sequence. These randomly selected students were sent a letter notifying them of the program and directing them to register for the designated section of the program. Students also had the option to register for traditional course delivery sections if desired, though no students did so.

Of the 83 eligible students, 27 students enrolled in the integrated curriculum program, with the other 56 students enrolling in the traditional course delivery sections. One student in the integrated curriculum program withdrew due to personal reasons, leaving 26 students in the program. Once enrolled in either the integrated curriculum program or the traditional course delivery sections, the students were provided with an overview of the research study and asked to provide informed consent to participate. An extremely limited number of the students enrolled in the traditional course delivery sections gave consent for their work to be included in the study and so comparison work was not feasible for this preliminary study. In the integrated curriculum program, 23 of the 26 students consented to have their work included in the study. All 23 of the research participants were female. Students were all special education majors seeking certification as a Learning Behavior Specialist 1 (cross categorical certification).

Data Collection

Data were collected from student work and a focus group. One focus group was held during the final week of the semester. The focus group was facilitated by a College of Education faculty member not otherwise affiliated with the program but with extensive experience in group facilitation. Questions related to students' perceptions of (a) the logistics of the cohort experience (e.g., schedule, assignment coordination), (b) the content relationships between courses, and (c) the relationships between courses and practicum experiences. There were six participants in this focus group.

Student work was copied after submission to the instructor and the original was returned to the student. Only the work from the 23 students who consented to participate in the research was included in this study. Student work used for this study included two in-class writing assignments related to the Cognition of Teaching model. Of the 23 research participants, 22 completed both writing assignments and all 22 were included in the data analysis. In both Cognition of Teaching writing assignments, students were asked to write about the extent to which the model reflected their own views of teaching, and in the second write, (end of semester write) how their understanding of the model had changed.

Data Analysis

Data analysis included qualitative analysis for data gathered in the focus group session and student work. The focus group audiotape was transcribed verbatim. The transcriptions and student writing were independently open-coded (Strauss & Corbin, 1998) by two of the researchers and then the codes were cross-checked by all three researchers. The codes were organized into categories and those categories were also used in analysis of student work samples. An iterative process for data analysis was implemented to ensure confirmability (Denzin & Lincoln, 2005). A table of categories based on the codes was constructed and continually reviewed as data analysis was completed. Researchers independently checked the category table with data from student work and focus groups and consensus was built for the categories.

Results

Student Perceptions of the Integrated Curriculum

Several themes related to integrated curriculum emerged from the focus group transcript, including scheduling, content coverage and planning, and the connection between content and practicum.

Scheduling. Focus group participants indicated that the cohort schedule was difficult to adjust to, but they otherwise had positive comments about the schedule. One student commented, "I mean it was hard to get used to in the beginning...But after the first couple days it's fine, and I really like it a lot better...". Another student commented,

I like how the course schedule is. I think it stressed me out more when I was going to a bunch of one hour classes because there was never enough time to get everything in and then I was confusing the contents with one class with another...and we have 6 hours when you can ask a question about anything. It's not like you have to wait for this one hour class and if you don't get to the question part then too bad.

Students also referenced the scheduling in their in-class writing assignments. They were positive about the class schedule writing "I don't feel so overwhelmed because I think about it as being what I need to do for one class" and

The way they lay out when projects are due...They made projects due on different days. I think if you are in two or three different classes that don't communicate with each other, I mean you

could have two or three big projects due on like one day. That's one thing that's probably reduced my stress level.

Content coverage and planning. Participants suggested that the planning of integration across courses was apparent and was a key to their learning. Several students noted a "flow" of content across courses,

I mean at the beginning of the semester I had this mind set that this teacher is going to get up, this teacher is going to get up, and this teacher is going to give input and three different spirals, but I mean it's flowed so well together that you just keep taking notes from one instructor to the next because the flow of the class is so well developed.

Another student commented, "They've really purposely planned the classes and that's definitely made a difference". Students also expressed appreciation of the coordination of assignment due dates.

Students also commented on the content coverage and planning in their in-class writing assignments. The "flow" of the curriculum again emerged as a theme. One student described as a strength, "how all of the information is blended together and how it makes sense together", and another student wrote "makes relating the info we're given easier to connect to one another". Others commented on "mesh" and content that is "tied together".

Connection between content and practicum. Students reported a connection between course content and their practicum experiences. The extent of that connection varied across students. Students felt that having opportunities to apply content assisted with their learning. One student noted,

We learned something in class one day and then we just go and implement it the next day. You can work it into your lesson plan and then we learned on Monday and implemented it on Tuesday and we can still talk about it. Talk about what worked or didn't work and go back through it, so that helps.

Students also suggested that it was easier to apply their practicum experience to coursework in the integrated curriculum model. As one student stated,

I think it's been easier to apply things to our practicum because of the integrated class because if I was in three separate classes it would be hard for me to bring that knowledge to each class. I know people that are in the other sections that are separated and they are so stressed out

figuring out which project is for which class but they don't understand the content...We really are able to flow smoothly through all of the material and application of it.

Students again also commented on the relationship to their practicum settings in their in-class writing assignments. One student wrote, "All projects [completed through practicum], discussions interconnected."

Cognition of Teaching Model as Curriculum Core

Reviewing the students' writing on the Cognition of Teaching Model indicates the students' perceptions of curriculum integration as grounded by the model. The Cognition of Teaching Model, a graphic representation of teaching, indicates the relationships of core aspects of teaching (see Figure 2). The underpinning of the model was addressed by the students, both at the beginning of the semester and at the end of the semester and in their analysis of their own growth in understanding teaching as reflected in the model. Three themes emerged in our analysis. Students demonstrated deeper understanding of the components of the model, paid greater attention to the relationship among components of the model, and recognized the importance of student-centered teaching.

Deeper understanding of the components of the model. Students reiterated the components of the Cognition of Teaching model in their initial writes, whereas in the second writes the students demonstrated deeper understanding of the model by describing characteristics of, or variations in, the components. For example, Jana initially recognized that teaching involved the three main components of the model—assessment, instruction and curriculum development. She wrote, "I believe it is very important to have an instructional plan that focuses on the goals of curriculum and assessment. In the model, instruction, curriculum and assessment depend on each other." At the end of the semester, Jana demonstrated a deeper understanding of curriculum development:

I think teaching involves individualization. All students are different and they have different styles of learning. So I think individualizing the curriculum to meet every students' needs is important...I want to take in the preferences of my students, family members of students, and social validators. Jana described her own growth thusly, "...I have a greater knowledge of each part. I now understand different concepts within curriculum development, instruction and assessment."

Likewise, Melinda initially wrote, "...if I was asked what I thought I would be doing in class [teaching] I would most likely say – assess and instruct. I feel that curriculum is something that we have to go by." Melinda's recognition of the elements minimally addresses curriculum development and includes assessment and instruction without elaboration. Her final response delves much more deeply into the process of teaching. Melinda writes,

...there are 4 main components. First there is the student. As a teacher we need to determine the best practices for the student and individualize for that student...Through assessment, a meaningful curriculum and individualized curricula we can do this [provide a great education].

The change in her conceptualization of teaching is not lost on Melinda. She wrote, "Comparing my conception of teaching from January and now are completely different. I had no idea what I was talking about 3 months ago...My idea before was to value assessing and instruction the most. Now it is to value the student the most."

Greater attention to the relationships among components of the model. The students also developed their understanding of the connection among the major components of the model, including the core concepts of assessment, curriculum, and instruction, and the connecting concepts of collaboration, decision-making, reflection, and self-determination. In Maggie's first response, she describes each component and its position in and importance to the model individually. In her second response, however, she writes about the model as a whole:

Teaching is selfless, as the whole model of teaching is focused on collaboration and centered on ethical practice for the student. We must put the students before us, by planning effectively in order to instruct and have our students learn. There are different parts to the Cognition of Teaching model, and each part is effective individually. However, the model will not be successful, and I will not be able to use the model effectively, if all three parts are not integrated together as I teach.

Maggie appears to connect the model to her values as a teacher.

In Lisa's initial response, she described how the model differed from her previous conceptions of teaching:

In my model...instruction was the largest piece, and assessment and curriculum were somewhat smaller. Also, I included reflection, collaboration, and decision-making with instruction, but did not think about how they tied in with collaboration and assessment...I thought this way because I saw instruction as the bulk of teaching, as viewed from a student's perspective.

In her second response, Lisa writes with more of a "teacher voice" and highlights the connections among core and connecting components of the model. She writes,

At the beginning of the semester, I agreed with the "wheel" but did not fully understand the "threads". Now that I do, I feel that they are just as important as the wheel. However, I might add for my own model that reflection and decision-making need to be purposeful...to really think about all parts of the Cognition of Teaching model while making decisions and reflecting is considerably more challenging, and a lot more meaningful.

In January, Hannah wrote,

...I've learned that assessment and instruction is always connected. I've also learned about how assessment is connected to curriculum and curriculum to instruction...I have never thought about the ideas of reflecting, decision-making, collaborating, and self-determination as the concepts that connect assessment, curriculum, and instruction.

She identified the major components and the "threads" that connect these components within the Cognition of Teaching model; however, her understanding is at a recognition level. In the final write of the semester, Hannah stated,

...these three concepts [assessment, instruction, and curriculum] always relate to and build off of one another...Additionally, the alternative curriculum project showed me the ways in which curriculum, instruction, and assessment all come about as a result of each other. One concept that I think is not stressed enough in the model is the fact that all three happen constantly and at the same time as the other ones.

Recognition of the importance of student-centered teaching. Students also demonstrated growth in understanding the importance of student-centered approaches. In Karen's initial response, she spoke to the importance of addressing individual student needs, stating,

The best interests of the students are the top of the list [of responsibilities as a teacher]. In order to teach to the best of my ability I know I will need to constantly be reflecting and changing based on my students' needs.

In her first response, Karen demonstrated that she values the student, but in her second response she demonstrated integration of concepts by connecting the other components of the model to the student. In the second response, she wrote,

This semester has exemplified the importance of student-centered learning, in class and in practicum. It is apparent to me that if the education is not planned for the student and does not pertain to the student, then there is no point. In having the student in the middle, the rest of the model makes sense. In order to teach what the student needs, we need to use assessment to find these needs, develop a curriculum to address these needs, and then instruct on this information.

She described her own growth, writing,

Having the student's interest in mind was at the top of my list for both. In my newer write I was able to look at each aspect and discuss why it is important as opposed to the general thoughts in my first one.

Discussion

Through this study, students' perceptions of an integrated curriculum and the impact of the integrated curriculum program on students' development were examined. Key findings related to perceptions about the connections between practicum and coursework, the grounding of learning in the Cognition of Teaching model, and the management of learning that arose from the integrated curriculum experience will be discussed further.

Student Perceptions of Integrated Curriculum Program

Student perceptions of the integrated curriculum program were overwhelmingly positive. Students expressed that their ability to make connections between practicum and coursework was enhanced through the integrated curriculum. Connecting theory and knowledge gained in coursework is one essential task of higher education (Feiman-Nemser, 2001; Schon, 1995; Zhu & Baylen, 2005), and one that requires continued effort on the part of teacher education programs. Integrated learning, fostered by

integrated curriculum, has been recommended for all programs in higher education, potentially benefiting students in any degree program (Fink, 2003; Huber & Hutchings, 2004).

At the end of the semester, the students were better able to see connections among the components of teaching in the Cognition of Teaching model than they were at the beginning of the semester. Using Fogarty's model (1991) of webbed curriculum (see Figure 1), the Cognition of Teaching model became the central core of our curriculum and the course content was purposefully "webbed" to this model. As with O'Neill's (2000) study of integrated curriculum, this conscious effort to web the curriculum enhanced learning as evinced through their self-reports. Likewise, core conceptual models in other disciplines could be "webbed" to further student outcomes. Scheja (2006) notes that, "...the approaches that students typically adopt in their studies tend to influence the quality of the understanding reached, with a deep approach often being associated with a more sophisticated understanding and better academic results than that of a surface approach" (pg. 422). The webbed approach to curriculum integration provides a foundation for the students' adoption of a deep approach to learning.

Schon (1995) indicates that traditional conceptualizations of knowledge used by higher education in contrast to a different conceptualization of knowledge used by K-12 education to be a false dichotomy. Schon (1995) notes, "We should think about practice as a setting not only for the application of knowledge but for its generation." Conceptualizing teacher preparation as an integration of "knowing in action" and "reflection in action" is crucial to teacher development. Professionals in other spheres should also look towards a generation of knowledge within their programs; the "intentional, deliberative, and reflexive stance towards vocation" (pg. 3) noted by Huber and Hutchings (2004). Utilizing an integrated curriculum model can facilitate this knowledge generation and reflexive stance.

The integrated curriculum program described here created a common foundation among the theoretical material embedded in the three courses and a bridge between that theoretical material and the field experience of the students. Class work purposefully provided knowledge which became the basis for generation of "knowledge in practice" which was then brought back to the classroom for reflection and refinement. The integrated curriculum model promoted the cyclical development of teaching knowledge. While the results of this study indicate positive outcomes in students' perceptions and development with the implementation of an integrated curriculum program, there are challenges to be overcome. As

instructors, we noted the substantial increase in time for course planning and delivery. Additionally, university structure does not always support or value this work. Yet, we also note this program enhanced our own teaching and understanding of our curriculum and we take those enhancements into our current courses.

Implications and Recommendations

Despite the difficulty in measuring student outcomes of the integrated curriculum, the students' positive perceptions of the integrated curriculum suggest that there is benefit to continued efforts in this area as well as continued investigation of the impact on student learning and practice. The common framework, the Cognition of Teaching model, facilitated the integration for us as well as for the students.

Institutionalizing an integrated curriculum within a block schedule structure may prove difficult for many teacher education programs as well as other higher education programs (Fink, 2003; Schneider & Schoenberg, 1999). However, based on students' perceptions of the integrated curriculum, teacher education programs and other higher education programs may benefit from engaging in curriculum integration. Teacher preparation programs are well-organized according to standards provided by various professional organizations, yet the overlap among standards is not always consciously addressed within and among courses. Similarly, as Schneider and Schoenberg note, "The degree to which a discipline represents a paradigmatic structure of knowledge that provides, in and of itself, a viable organizational principle for undergraduate learning is called into question by the increasing 'interdisciplinarity' of both student interests and faculty behaviors..." (pg. 30). The complexity of work that students will do once out of the academy demands a learning experience that integrates knowledge.

These data lend credence to the recommendation that integration of curriculum occur within a common framework (Shapiro, 2003). The Cognition of Teaching model is one such framework. These initial data indicate that it is effective in promoting pre-service teachers' understanding of the complex work of teaching. Teacher educators can use an agreed-upon framework to illustrate connections to students throughout their programs of study, and the framework can be threaded throughout a teacher preparation program. The authors hypothesize that similar results will be obtained with other programs. Frameworks used by other disciplines can be researched to validate the effectiveness of their use.

This study leads us to ask more questions about improving the efficacy of teacher preparation programs and by correlate other programs in higher education. Future research should be focused on collecting multiple measures of students' understanding of the connections among various aspects of teaching so that a solid base of understanding can be built. Outcome measures of student knowledge and skills are needed. Additionally, more research on integrative models that prove most effective for programs in higher education is needed. The multiple ways that curriculum can be integrated doesn't assume that all are effective. Research comparing integrated curriculum delivery to traditional delivery, as well as comparing different models of integrated curriculum, should be conducted. The effects of these approaches on student perceptions and learning outcomes need to be further investigated. The influence of factors such as student characteristics and content areas also need further investigation. In the current climate calling for effective instructional practices in university classrooms, it is imperative that we engage in substantial research in this area. Innovative practices, such as curriculum integration, hold promise for higher education, and continued research is needed to explore their full impact.

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Figure 1

Levels of integrated curriculum, adapted from Fogarty, R. (1991). *The mindful school: How to integrate the curriculum*. Palatine, IL: Skylight Publishing.

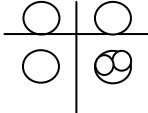
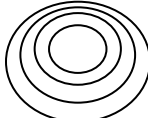
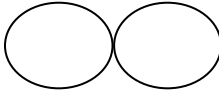
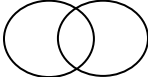
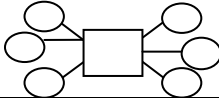
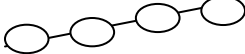
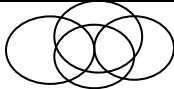
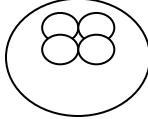
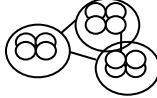
Level of Curriculum Integration	Visual Representation of Level
Connected	
Nested	
Sequenced	
Shared	
Webbed	
Threaded	
Integrated	
Immersed	
Networked	

Figure 2

Cognition of teaching model illustrating the relationships among teaching practices and principles.

