

Using the IF Discussion Process in a Service-Learning Enhanced Course: A Study of Student Learning Outcomes

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Executive Summary

This paper's first section describes the Interactivity Foundation (IF) student-centered discussion process – a 'learning through discussion approach' – as a useful pedagogy for enhancing students' critical reflection on issues raised by community service. The stages of discussion and student-centered format of this discussion approach are described. A literature review of the ways in which group discussion has been found to promote deep learning is presented as a rationale for why the discussion process is expected to enhance students' critical reflection in a service learning-enhanced course.

The next section of the paper outlines the research questions framing the assessment of student learning that took place. Three questions are presented: 1) Does the student centered discussion process support the development of thinking skills important for reflection and evaluation?; 2) Does the student-centered discussion process support the development of communication skills important for teamwork and citizenship?; and 3) Does the student-centered discussion process support the development of collaboration skills important for community advocacy and civic participation?

The next two sections of the paper provide an overview of the service learning-enhanced Community Psychology course in which the investigation of student learning was conducted, and the research design used to collect and analyze data. The quantitative and qualitative measures used for assessment are described.

The remaining sections of the paper describe the results of the study and discuss conclusions. Findings are presented that show that the IF discussion process enhanced student learning in three areas: (1) being a good communicator, (2) being a critical thinker, and (3) being an empowered collaborator. Pre-post survey findings and student comments are presented to support these findings and conclusions are drawn regarding the value of using the IF discussion process in service learning-enhanced and other courses.

Why Use the IF Discussion Process in a Service Learning-Enhanced Course?

Courses that include a service learning component offer students the opportunity to gain understanding of community issues and exercise responsible citizenship (Edwards & Foley, 1998). What distinguishes service learning from volunteer work is that just doing community service is not enough: there also needs to be a 'capture' of knowledge through reflection on the community service (Jay, 2008, p.255). Guided reflection is typically the main form of instructional intervention (Eyler & Giles, 1999). The literature describing best practices in service learning-enhanced courses suggests that group discussion is an effective tool to promote

guided reflection on the issues encountered in community service. Group discussion promotes meaningful application and helps students gain “a fuller understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility” (Bringle & Hatcher, 1995, p.112). As Hutchinson (2005) points out, without dialogic reflection on how course concepts, community service, and larger socio-political issues intersect, students have “difficulty grasping the significance of their work within the community and understanding of their possible roles as citizens who can effect change” (p.428).

The IF Discussion Process

This paper describes a distinctive small group discussion pedagogy developed by the Interactivity Foundation¹, a non-partisan non-profit dedicated to enhancing public thinking about public policy through a collaborative discussion process. I adapted this discussion process to fit my course(s) after attending one of the Interactivity Foundation’s weeklong Summer Institutes for College Faculty in 2009. The “student-centered discussion approach” outlined in this paper refers to this model, described more fully below.

The IF discussion process reflects a “learning through discussion” approach (Rabow, Charness, Kipperman, et al, 1994; Crabtree, Royeen, & Mu, 2001), a teaching and learning method wherein students engage course material through small group discussion. What makes the discussion process a unique “learning through discussion” approach is its three-stage process for identifying areas of concern and conceptualizing policies to effect change (Byrd, 2009). In stage one, students discuss an area of concern such as a fundamental issue impacting the community or society. They develop questions about this area of concern from multiple perspectives in order to engage in the broadest possible inquiry. In stage two, students generate policy possibilities that respond to these questions, being conceptual in their thinking rather than attempting to look for specific answers. In stage three, students identify and hone how these policy possibilities might take shape in the real world and what outcomes might arise, excluding some possibilities and revising others. This student-centered discussion process can be used to help students, in the words of Dillon (1994), “join together in addressing a question of common concern, exchanging and examining different views to form their answer, enhancing their knowledge or understanding...or action over the matter at issue” (p.8).

The student-centered discussion process is highly interactive and requires that participants think conceptually, compare points of view, and synthesize ideas to arrive at deep understanding. This discussion process, to use Carnes’ (2004) phrasing, encourages liminal thinking and gives students “the freedom to invent new solutions to old problems, or to regard familiar things in new ways (p.B7). In this approach, students construct knowledge with other learners in an active fashion, placing them (rather than the instructor) at the center of the learning process (Lea,

¹ The Interactivity Foundation works to enhance and expand public discussion by bringing people together in small group discussions of broad topics of public policy concern. Foundation Fellows conduct Project Discussions that engage panels of selected generalists and specialists on a public policy topic for private (or “sanctuary”) discussions to explore multiple policy possibilities, which are then worked into a Discussion Report. The Foundation also conducts shorter series of small group Public Discussions, which are open to all interested participants and use the possibilities from Discussion Reports as the starting point for further exploration and development. Finally, the Foundation also collaborates with college faculty to develop facilitated, student-centered Classroom Discussions.

Stephenson, & Troy, 2003). Students are responsible for conducting the discussion process – serving as discussion facilitators and notetakers in their discussion group – and for exercising a high level of communication skills to do so. Students also conduct self-assessment of the group discussion process at the end of every session, identifying strategies to improve the discussion and facilitation process.

The emphasis on exploring social issues and their policy solutions in the student-centered discussion process suggests that it could be a useful pedagogy for enhancing students' critical reflection on the issues raised by community service. Therefore, the rationale for using the student-centered discussion process in a service learning-enhanced course is as follows:

- (1) the student-centered discussion process promotes critical reflection and analysis of issues encountered in service learning
- (2) the student-centered discussion process promotes development of communication and collaboration skills important for community service
- (3) the student-centered discussion process promotes development of civic responsibility

Using Group Discussion to Promote Deep Learning

Teaching and learning research on service learning-enhanced courses suggests that group discussion is an effective tool to promote reflection and analysis of the issues encountered in community service. Without reflection on how community service, course concepts, and the socio-political context intersect, students have difficulty understanding the importance of their work in the community and their roles as citizens who can affect change.

A large and growing body of higher education research demonstrates that group discussion enhances understanding of course content and student responsibility for learning by promoting the development of the following skills:

- interthinking – the collaborative testing and synthesis of ideas (Mercer, 2000)
- conceptual thinking (Cooper, 1999)
- understanding of different points of view (Stein, Issacs, & Andrews, 2004)
- communication and deliberation skills such as listening, presenting ideas, and providing feedback (Colbeck, Campbell, & Bjorklund, 2000; Smith & Barth, 2006)
- transferable skills, such as the ability to work in teams (Andrusyk & Andrusyk, 2003; Brookfield & Preskill, 2005)

Higher education research also suggests that students are more likely to develop these skills and abilities when discussion is structured to be collaborative and student-centered in the following ways:

- students rather than instructors lead discussion (Almasi, O'Flahavan, & Poonam, 2001)
- group discussion occurs on an ongoing basis (Wenger, McDermott, & Snyder, 2002)
- students shape the content of discussion (Weber, Maher, Powell, & Lee, 2008)
- students share a sense of community – a feeling of trust and shared responsibility (Lave & Wenger, 1991; Rovai, 2002; Soto-Johnson, Yestness, & Dalton, 2008)
- students view group interaction as crucial to their success (Chavez, Taralba, & Malik, 2006)
- the group routinely evaluates if they are practicing the necessary conditions for successful dialogue (Gillies, 2007)

These findings suggest that student learning is enhanced if the student role in group discussion changes to those of engaged thinker and responder, and the instructor's role changes to that of coordinator of student-centered discussion.

Research Questions for Assessment of Student Learning

Although group discussion is widely used to advance reflection in service learning-enhanced courses, there are very few studies examining whether the discussion methods used are effective for promoting critical reflection. To address this gap, a study was conducted to evaluate how the IF student-centered discussion process supports and enhances critical reflection in a service learning-enhanced course.

Building on what is currently known in the higher education literature on learning outcomes associated with group discussion, the research questions identified for this study were as follows:

- Does the student-centered discussion process support the development of communication skills important for contributing ideas and working well with others?
- Does the student-centered discussion process support the development of thinking skills important for understanding conceptual information and comparing points of view?
- Does the student-centered discussion process support the development of collaboration skills important for teamwork and civic engagement?

An Overview of the Course

The study took place in an upper-division undergraduate Community Psychology course in an urban liberal arts college. The course was designed for students to be able to do three things:

- Understand and apply community psychology concepts and models
- Explore possibilities for practicing community psychology
- Develop communication and discussion facilitation skills

Most of the students taking the course intended to enter the human services or health professions fields, and the instructor believed that structuring the course to promote the above learning goals would enhance students' preparation for careers in these fields.

The objectives of the course were achieved through several course design elements:

Service Learning

Students participated in a community agency in their local communities throughout the semester. Each student had to arrange a service learning experience and have the instructor approve the placement.

Discussion Groups

Students discussed issues related to their service learning experiences each week in small groups using the IF discussion process. During these discussions, students were responsible for incorporating community psychology concepts and models addressed in assigned readings.

Assignments

Students had a variety of assignments. These included:

- Semester-long participation in a community agency in their residential communities
- Weekly participation in small group discussion to reflect on community service and conceptualize policies that would advance social change
- Completion of several brief papers analyzing their service learning and group discussion experiences
- Presentation of a poster at the end of the semester describing the community agency in which they served

Instruction/Demonstration

During the first two weeks of class, the instructor simulated the student-centered discussion process with the entire class. Students learned how to focus and synthesize discussion contributions and how to encourage broad participation. The instructor then assigned students to

six small groups of 7-9 members each, balancing members across groups by gender, ethnicity, major, and other factors.

Student/Teacher Roles

Students took turns serving as discussion facilitator and notetaker in their groups. Facilitators were expected to lead group discussion using questions they had developed based on assigned readings, previous session themes, and stage of discussion. Notetakers were expected to record key discussion points on poster board to aid group process and provide documentation of discussion flow. With students' roles defined, groups were encouraged to explore specific areas of concern that arose in the context of their service experiences in relation to community psychology principles and models. Throughout the discussion process, the instructor provided pedagogical support: the instructor assigned readings, assisted with logistics, and provided feedback to groups and evaluation of facilitators.

Course Logistics

The class met once each week for a three hour block of time. There were 55 students enrolled in the course.

Assessment of Student Performance

Evaluation of student performance included the following:

- Group discussion participation, including each student's performance as discussion facilitator and group notetaker – 45%
- Community service – 30%
- Written assignments – 25%

Research Design

The design of the study had several components:

Participants

All students in the Community Psychology course participated in the study ($N = 55$). Seventy five percent of the participants were female and half were over age 25. Participants were predominantly ethnic minority students (89%). Two-thirds of the participants were psychology majors and the remaining third were health professions or social work majors. Study participation was voluntary. All study data were analyzed after the course was completed to eliminate instructor bias and not compromise the assessment process.

Study methods

The research design was a mixed methods approach using both quantitative and qualitative data. A mixed methods approach was used because it provided the most coherent approach to the research questions at hand (Karsenti & Savoie-Zajc, 2000) and the data could be triangulated to enrich description and reinforce results (Johnson & Onwuegbuzie, 2004). No control group was used in the design since it was not acceptable from an ethical perspective to exclude a group of students from the discussion process. Moreover, a control group was not needed since the goal of analysis was to provide evidence of the applicability of the IF discussion process so that other instructors interested in the transferability of the pedagogy had a base of information (Lincoln & Guba, 1985, p.124).

Data Sources and Procedures

Data sources included both quantitative and qualitative measures.

A pre-post survey was administered, first in the second week and then in the final week of the 15 week semester, that included 36 closed questions using a five-point rating scale (*Strongly disagree* = 1 to *Strongly agree* = 5). By having students complete essentially the same instrument at the end of the course as they did at the beginning, it was possible to evaluate how students believed their learning changed over time. The survey consisted of questions organized into subscales that assessed the following constructs: communication, thinking, and collaboration. To increase the content validity of the survey, survey items were developed from instruments used to assess these constructs as described in the literature (McKinney, McKinney, Franiuk, & Schweitzer, 2006; Payne, Monk-Turner, Smith, & Sumter, 2006; Wood & Kardash, 2002).

Cronbach's alpha was used to assess the internal consistency of the three subscales, with the result that they demonstrated good item-test reliability, from .72 to .85. Overall change in pre-

post survey responses was computed, showing that the post-test mean of all items was 3.03 ($SD = .67$, $df = 46$), which is higher than the overall pre-test mean of 2.81 ($SD = .75$, $df = 46$). While this percentage difference was positive, it was also found to be statistically significant at the .05 level. Paired sample t -testing were then used to determine change in individual survey items over time and their significance levels. Only the responses from those students who completed both the pre- and post-survey were used ($N = 47$), a 92% return rate due to attrition.

In addition to administering the pre-post survey, the following qualitative data were collected:

- Responses to eight open-ended questions in the pre-post survey
- Comments made in papers students completed throughout the semester
- Statements made by four students who were interviewed after the course had ended

Qualitative data were clustered by construct theme (i.e., communication, thinking, collaboration) and then analyzed through a process of open coding (Strauss & Corbin, 1990).

Findings from the quantitative and qualitative data were then triangulated to achieve thick description. Assessment focused on the ways in which student learning was impacted by the student-centered discussion process and how discussion supported students' critical reflection on their service learning experiences.

Assessment of Student Learning

Findings show that the IF discussion process enhanced student learning in three areas: being a good communicator, being a critical thinker, and being an empowered collaborator.

Being a Good Communicator

Both the quantitative and qualitative data show that participation in the IF discussion process improved students' communication skills.

Pre-post survey findings indicate that students significantly improved their communication skills in six areas (Table 1):

- Listening actively
- Asking questions
- Contributing ideas
- Speaking with confidence
- Working well with others
- Respecting differences of opinion

Survey Items	Pre-test			Post-test			Difference <i>df</i> = 46
	<u>M</u>	<u>% A/SA</u> (<u>N</u>)	<u>SD</u>	<u>M</u>	<u>%A/SA</u> (<u>N</u>)	<u>SD</u>	
Listen actively	2.61	45% (21)	.68	2.92	62% (29)	.69	.30*
Ask questions	2.34	32% (15)	.76	2.68	49% (23)	.64	.35**
Contribute ideas	2.69	49% (23)	.79	2.86	58% (27)	.56	.38**
Initiate discussion	2.73	51% (24)	.68	2.86	58% (27)	.54	.13
Speak with confidence	2.93	62% (29)	.63	3.48	90% (42)	.50	.55**
Persuade others	2.94	62% (29)	.61	3.01	66% (31)	.72	.07
Show emotional self-control	2.80	55% (26)	.64	2.62	47% (22)	.76	-.18
Work well with others	2.86	58% (27)	.68	3.20	75% (36)	.45	.34**
Respect differences of opinion	2.91	60% (28)	.63	3.13	71% (33)	.45	.22*
Support others' ideas	2.15	22% (10)	.76	2.30	30% (14)	.64	.15
Provide and accept feedback	2.82	56% (26)	.68	3.00	66% (31)	.89	.20
Resolve conflict	2.31	30% (14)	.72	2.49	53% (25)	.84	.18

Table 1. Change Over Time in Communication Skills

Note: * $p < .05$; ** $p < .01$

While the direction of change was positive for all other communication skill items assessed in the pre-post survey except one (i.e., show emotional self-control), the change that occurred was not statistically significant.

Analysis of the quantitative and qualitative data on communication skills indicates that the discussion process improved students' (1) communicative confidence and (2) interpersonal communication skills.

(1) Communicative Confidence

Due to the strength of the quantitative findings and the volume of comments on this topic in student papers and in open-ended survey questions, one of the most robust study findings was that participation in the discussion process improved students' communicative confidence. The strength of this outcome is reflected in the post survey finding that 90% of respondents ($N = 42$) agreed or strongly agreed that discussion improved their ability to "speak with confidence." The following statements reflect student attitudes on this topic:

I am definitely more confident about speaking in front of others from being in the group. I feel more free to participate in discussions than I did before this experience.

Discussion helped me express my thoughts more clearly. Hearing others helped me concentrate my ideas and focus what I was thinking...so I had it clearer in my mind and could express it clearly.

Speaking in such a close group was new to me. At first I didn't speak a lot because I didn't think you should speak unless you knew your stuff, but you have to have confidence in your knowledge. Because everyone contributed and listened to each other, we all had something to offer...It was a treat to have this experience and learn how to speak in a group.

For many of the students, gains in confidence were attributed to the experience of being a discussion facilitator. A student described the experience:

You go into discussion thinking you have the power to decide how conversation should proceed – the mood, direction, and content of the discussion – but you discover it's not entirely in your hands. Being the discussion facilitator was difficult for me, but I became a lot more confident in my speaking abilities as a result. I can be shy at times but this process allowed me to gain the confidence I needed to speak. Being a group facilitator showed me a different way to participate in discussion.

In many of the comments about facilitation, students contrasted their expectations of the experience as something they dreaded with their actual experience of facilitation as boosting their self-confidence. While not all students had a pleasurable facilitation experience, even those who were initially intimidated by the experience reported that it increased their confidence. A

student expressed this when she said, “I didn’t think I would enjoy it. In fact, I was worried I wouldn’t be able to handle the over-talkers but learned I could. Now that I have done it, the experience made it easier to talk in groups.”

Thus, while being a discussion facilitator was a challenging experience for many students, it helped them develop confidence in their ability to communicate.

Students also gained confidence by learning to give and receive feedback to fellow group members on their communication and facilitation skills. While there was no significant difference in the pre- and post-survey responses to the item “provide and accept feedback”, student comments nonetheless indicate the connection many students made between giving or receiving feedback and gaining confidence in their communication skills. A student who was interviewed stated:

I think the biggest challenge for me was how I learned to give and receive feedback from my group. I learned how to give feedback to help people be better facilitators...I learned from watching them how to facilitate better. I learned what to do differently and what not to do. Getting feedback was helpful too. Getting feedback helped me note what I did well and what I needed to improve. The feedback I got gave me a lot of insight. It was hard for me but either way, it was a good learning experience. I was worried but my group was supportive and so I think I am a better speaker in groups because of this and will be able to lead a discussion better when I have to do it again.

In summary, the quantitative and qualitative data indicate that students attributed gains in communicative confidence to their experience facilitating discussion and providing and receiving feedback during the discussion process.

These outcomes echo previous research findings indicating that peer interaction via group discussion enhances students’ communication skills and confidence in one’s ability to succeed (Murphy & Alexander, 2000; Crook, 1994). As the student comments presented here attest, development of communicative confidence is advanced when learners have opportunities to raise questions and provide critical and contextualized feedback (Dillon, 1986).

(2) Interpersonal Communication

Both the quantitative and qualitative data show that students’ interpersonal communication skills were enhanced by their participation in the discussion process. The strength of this outcome is reflected in the post-survey findings that 75% of respondents ($N = 36$) agreed or strongly agreed that discussion improved their ability to “work well with others”, and 71% ($N = 33$) agreed or strongly agreed that discussion improved their ability to “respect differences of opinion.” Survey results also reflect that students believe they significantly improved their ability to “listen actively”, “ask questions”, and “contribute ideas” by the end of the course of the semester.

Comments in student papers and responses to open-ended survey questions indicate that students believe that discussion improved their ability to communicate with others in a collaborative

manner. Over half of all participants commented that they learned how to listen better to what others were saying. In the words of one student, “I learned to listen better and think before I jumped to speak. I learned to listen to what others were saying and put aside my judgment while I considered the idea we were discussing together.” Other students commented that the discussion process advanced their ability to learn with and from others. For example, a student who was interviewed stated:

Using the IF process really brought home that not everyone views things the same way. A lot of the time, each of us approached the problem differently, but when you have to discuss things as a group, you have to be open and respect other people’s views. It takes a lot of work to have the different personalities talk but you get a much better understanding of the problem when everybody works together.

Another student described why discussion outcomes were better when group members worked together to consider ideas:

When you work in a group, you learn we all have different knowledge and skills. I just feel our group accomplished more together than we would have alone as individuals. Talking together we found solutions that were the sum of all our best ideas. When we put our different ideas together, we figured things out more and I think we had better ideas and recommendations.

Students also commented in their papers that the discussion process helped them practice interpersonal skills important for career development. One student wrote, “Practicing how to discuss things as a group is valuable because as professionals, we need to know how to work in teams.” Another stated, “I think it is important for us to learn how to communicate with different people because we will be very limited if we choose to work independently...You have to be able to work alongside with others.” These comments suggest that students believe that their participation in the discussion process provided valuable professional socialization.

At the same time, some students acknowledged that working with some members in their groups was immensely challenging and that they had to learn how to manage differences and conflicts that arose in the course of group discussion. The instructor observed that at various times during the semester, each group experienced mild interpersonal conflict in the form of verbal disagreements, inconsiderate or derogatory remarks, lack of preparation, or monopoly of conversation by a few individuals. While this conflict at times reduced group productivity, it also led to new group ideas and approaches. All groups, for example, established procedures for ensuring that equal time and respect be afforded to all members, or took action to motivate certain group members to participate differently. One student described this process:

Each individual interacts differently. It all depends on that person. You can’t change a person overnight. But in our discussion we stressed respect for others and we set up rules about how to communicate with others and this helped us focus our discussions and learn from each other.

Thus, the findings indicate that most students attributed gains in interpersonal communication skills to their participation in the discussion process. Several students noted the value of developing interpersonal communication skills as part of their professional socialization. While some students found working with fellow group discussion members to be challenging, members of all groups worked together to establish guidelines to address conflicts that arose.

These data support previous research indicating that collaborative forms of learning such as student-centered discussion promote the development of communication, interpersonal, and teamwork skills (de la Harpe, Radloff, & Wyber, 2000; Longworth & Davies, 1996; Tait & Godfrey, 1999) – the transferrable skills most commonly valued among employers (Floyd & Gordon, 1998; Moy, 1999).

Being a Critical Thinker

Both the quantitative and qualitative data show that participation in the IF discussion process improved students' critical thinking skills. Critical thinking is defined as the ability to broaden and deepen one's thinking (Eyler & Giles, 1999; Paul & Elder, 2008) where thoughts are based on evidence or sound reasoning that is facilitated through shared ownership of the learning process (Carnegie Report, 2006; Mezirow, 1990).

Pre-post survey findings indicate that students significantly improved their thinking skills in four areas (Table 2):

- Understanding information on a conceptual level
- Drawing connections between ideas
- Comparing points of view
- Drawing conclusions

Survey Items	Pre-test			Post-test			Difference <i>df</i> = 46
	<u>M</u>	<u>% A/SA</u> (<u>N</u>)	<u>SD</u>	<u>M</u>	<u>%A/SA</u> (<u>N</u>)	<u>SD</u>	
Use prior knowledge	2.83	56% (26)	.50	3.02	66% (31)	.50	.19
Recall facts & details	2.63	47% (22)	.60	2.50	41% (19)	.70	-.13
Understand information in context	2.65	47% (22)	.69	2.78	54% (25)	.45	.13
Question assumptions	2.77	53% (25)	.64	2.94	62% (29)	.54	.17
Distinguish between fact & opinion	2.84	57% (27)	.60	3.02	66% (31)	.90	.18
Understand information on a conceptual level	2.98	64% (30)	.73	3.42	85% (40)	.54	.44**
Make inferences	2.65	47% (22)	.63	2.84	56% (26)	.72	.19
Draw connections between ideas	2.96	64% (30)	.68	3.26	79% (37)	.62	.30*
Determine importance of information	2.90	60% (28)	.72	3.06	68% (32)	.66	.16
Compare points of view	2.82	56% (26)	.72	3.16	73% (34)	.89	.34*
Draw conclusions	2.77	53% (25)	.63	3.10	70% (33)	.72	.33*
Synthesize information	2.84	58% (27)	.56	2.98	64% (30)	.54	.14

Table 2. Change Over Time in Thinking Skills

Note: * $p < .05$; ** $p < .01$

While the direction of change was positive for all other communication skill items assessed in the pre-post survey except one (i.e., recall facts and details), the change that occurred was not statistically significant.

Analysis of the quantitative and qualitative data on thinking skills indicates that participation in the discussion process improved students' 1) conceptual thinking skills and (2) perspective-taking skills.

(1) Conceptual Thinking

The findings show that participation in the discussion process enhanced students' conceptual thinking skills. The strength of this outcome is reflected in the post-survey findings that 85% of respondents ($N = 40$) agreed or strongly agreed that discussion improved their ability to "understand information on a conceptual level", and 79% ($N = 37$) agreed or strongly agreed that discussion improved their ability to "draw connections between ideas."

Findings suggest that using discussion to explore concerns and policy possibilities on a conceptual level helped students develop deep understanding of course-related material. "The terms and examples we read about made more sense when we talked about them because we talked about where to apply them and figured out how to connect the ideas", stated one student. Asking broad questions about community issues in stage one of the discussion process helped students think about the issues on a conceptual level and draw connections between ideas they might otherwise have missed. As one student put it, "Asking questions stimulated me to think deeper into the material we were discussing and this helped me understand the issues we talked about and how they were related to each other with a more critical perspective." Students also recognized that discussion emphasis on in-depth exploration of an issue and its policy implications helped them evaluate issues more thoroughly and more critically. A student commented to this effect when he said, "Instead of just skimming the surface, discussion helped me go in-depth into issues in the community. Talking about the different aspects gave me insight...allowed me to apply the theories and connect concepts from the readings with real understanding."

Students also reported that facilitating discussion and creating group notes improved their ability to discuss course material on a conceptual level. Several students commented that preparing discussion questions helped them identify key concepts and ideas for group discussion. Other students commented that having a notetaker document the flow of ideas during discussion improved the ability of the group to think about the content of their conversations more conceptually. As one student put it:

It was challenging to take notes of our discussion but it was very useful because we could see the flow of our conversation and pick out which ideas were more important for further discussion. Other times, we compared points that people made and the notes helped us think about the important ideas that were discussed.

In summary, the findings indicate that students gained conceptual thinking skills. Students reported that discussion facilitation and group notetaking were useful activities for identifying important ideas and exploring issues at an in-depth level.

These data support previous research showing that small group discussion advances conceptual thinking and promotes deep understanding of course content (Berman, 2006).

(2) Perspective-taking

Findings also show that participation in the student-centered discussion process enhanced students' perspective-taking skills. The strength of this outcome is reflected in the post-survey findings that 73% of respondents ($N = 34$) agreed or strongly agreed that discussion improved their ability to "compare points of view," and 70% ($N = 33$) agreed or strongly agreed that discussion improved their ability to "draw conclusions."

Using a discussion process of contrasting approaches to problems and their possible policy solutions helped students develop perspective-taking skills and evaluate information more critically. In reflection papers, several students wrote about the benefits of practicing perspective-taking during discussion. A student stated, "Most of the time we don't approach problems different ways, how helpful that might be. But when you discuss things in the group, you have to be open to others' ideas so that you can make your own judgments." Another commented that, "In discussion, you have to consider all the angles, think in whole new ways. Because of the variety of people in the group, you want to make sure that everybody shares their ideas and considers different perspectives." One student described how contrasting different approaches and possibilities during discussion aided critical thinking about problems:

When someone argued for a specific approach to the problem, you had to relate it to your own knowledge and viewpoint. This relates closely to the ability to analyze something and think about it critically. By comparing different approaches, we figured out different things that could be done....If you are going to figure out how to do something differently, you have to consider different possibilities of what might happen before you know what a good solution is. You also want to make sure that you have considered every possibility, thought of all the options.

Still another student pointed out that the evaluation of different approaches and policy options that occurred during discussion helped him "not close off possibilities." He stated, "I realized that sometimes in discussion I can hold different perspectives on a topic at the same and overall I saw the problem we were discussing more thoroughly when this happened."

Comments made in papers and in response to open-ended survey questions also reflect that students believed that perspective-taking was a valuable skill to practice. Several students expressed the idea that looking at community problems from different angles and comparing their policy solutions led them to new insights. One student wrote:

What I liked most about our discussions was taking a fresh look at problems in the community and their solutions. We had to strip away all our assumptions about how to fix the problems, and we discussed how we shouldn't get stuck in what has been tried in the past. We had to think about the strengths and weaknesses of policies we proposed. We had to analyze how they'd affect the various constituencies and why some things would work or might not work. I liked how we invented new choices.

Other students commented that practicing perspective-taking in their discussion group was valuable training for work in their communities and in their professional lives. One student said it best when she commented:

Having a lot of knowledge is important, but having to consider different perspectives is an important ability in a lot of different situations. Putting yourself in another person's place and seeing the situation like they see it is a good thing to be able to do if you work with people. Developing this skill will help us in a lot of life areas I believe.

Thus, students reported that the discussion process enhanced their critical thinking skills, particularly their ability to contrast and compare ideas and consider different perspectives. Utilizing information gleaned from their community service and group discussion experiences, students were able to analyze community issues from both an individual and broader social perspective.

These data support the findings of previous studies that conclude that critical reflection on community service has a noticeable impact on students' intellectual development (Ngai, 2006), including increasing complexity of thinking about social issues (Boss, 1994, as cited in Howard, 2003, p.4) and being able to justify and defend conflicting positions with peers (Murphy & Alexander, 2000).

Being an Empowered Collaborator

Both the quantitative and qualitative data show that the IF discussion process enhanced students' collaboration skills.

Pre-post survey findings indicate that students significantly improved their collaboration skills in five areas (Table 3):

- Developing bonds/connectedness
- Demonstrating cooperation/teamwork
- Sharing leadership
- Becoming empowered
- Feeling a sense of efficacy

Survey Items	Pre-test			Post-test			Difference <i>df</i> = 46
	<u>M</u>	<u>% A/SA</u> <u>(N)</u>	<u>SD</u>	<u>M</u>	<u>%A/SA</u> <u>(N)</u>	<u>SD</u>	
Feel trust/acceptance	2.82	56% (26)	.54	3.04	66% (31)	.82	.22
Share expectations	2.63	47% (22)	.45	2.78	54% (25)	.60	.15
Show flexibility/compromise	2.66	47% (22)	.63	2.78	54% (25)	.72	.12
Develop bonds/connectedness	2.73	51% (24)	.70	3.28	79% (37)	.54	.55**
Be accountable to group members	2.58	43% (20)	.54	2.78	54% (25)	.84	.20
Demonstrate cooperation/teamwork	2.98	64% (30)	.71	3.30	81% (38)	.66	.32*
Share leadership	2.90	60% (28)	.54	3.26	77% (36)	.66	.36*
Rely on others	2.85	56% (26)	.70	2.89	58% (27)	.68	.04
Be goal-directed	2.76	53% (25)	.89	2.94	62% (29)	.72	.18
Delegate tasks	2.50	41% (19)	.72	2.58	43% (20)	.82	.08
Become empowered	2.77	53% (25)	.54	3.20	75% (35)	.50	.43**
Feel a sense of efficacy	2.76	53% (25)	.54	3.08	68% (32)	.62	.32*

Table 3. Change Over Time in Collaboration Skills

Note: * $p < .05$; ** $p < .01$

While the direction of change was positive for all other collaboration skill items assessed in the pre-post survey, the change that occurred was not statistically significant.

Analysis of the quantitative and qualitative data on development of collaboration skills indicates that the discussion process empowered students to 1) manage the learning process and (2) become change agents.

(1) Managing the Learning Process

Findings show that participation in the discussion process enhanced students' collaborative learning skills, particularly the ability to manage the learning process. The strength of this outcome is reflected in the post-survey findings that 81% of respondents ($N = 38$) agreed or strongly agreed that discussion improved their ability to "demonstrate cooperation/teamwork," and 77% ($N = 36$) agreed or strongly agreed that discussion improved their ability to "share leadership."

Comments made in papers and in response to open-ended survey questions suggest that students saw themselves as controlling the learning process. "Our way of discussion made me realize that we were the ones doing all the talking and planning, not the professor," explained one student. "There were no ready-made answers," another student commented. "It was our job to ask questions and answer them. It was our job to come up with policies to fix problems."

Managing the learning process included feeling a sense of responsibility for individual and collective learning, as the following statements from students indicate:

Usually the professor is doing all the talking and all the answers are more clear-cut. Usually if you ask a question, that's because you don't know what you're talking about. But here we asked a lot of questions with a lot more students talking. We took more time to move from one point to another and to discuss things we had talked about in previous weeks. We ran the discussion and if went well or didn't, we were the ones responsible.

In class the way we talked about the ideas in the readings and how they fit our communities was up to us... We had to figure out what was important information and what to do with it as a group. We were responsible. This made the whole process more our own.

We are used to being told what to know, what to think. Here you had to figure out what information helped discussion. Instead of the professor giving it to you, you had to contribute....Everybody had a part in the process.

Discussions didn't give us ready-made answers. We learned about each other's experiences and what it was like in the different communities. We were expected to do this together for ourselves.

This sense of collaborative responsibility perhaps explains why many students also commented that they came to class better prepared to discuss course-related information and were more willing to contribute to discussion than in other classes.

Both the quantitative and qualitative data also indicate that an important benefit of learning through small group discussion was that students came to care about one another and enjoyed interacting with group members. The strength of this outcome is reflected in the post-survey findings that 79% of respondents ($N = 37$) agreed or strongly agreed that discussion improved their ability to “develop bonds/connectedness.” Several students commented in their papers that they experienced a sense of comradery and developed strong friendships with other group members during the semester as a result of the collaborative nature of the discussion process.

Thus, the findings indicate that students felt empowered by the discussion process to exercise control over their own learning. An added benefit was that students enjoyed collaborating with other students, and some group members even developed friendships. While group members did not always hit it off with each other at the onset of each group’s formation, each group established a way of working together over the course of the semester that enhanced students’ collaboration skills.

These data suggest that student-centered group discussion promoted a sense of community – “a culture of learning in which everyone is involved in a collective effort of understanding” based on trust, connectedness, and shared experiences (Bielaczyc & Collins, 1999, p.271). Study results echo previous research findings that student-centered group interaction supports the development of friendships among students and the sense that group members belong to something greater than themselves (Porter, 2003). These findings illustrate that group discussion produces a “process of transformation of participation itself” (Rogoff, 1994, p.209).

(2) Being a Change Agent

Findings show that students developed a sense of civic empowerment as a result of reflecting on their community service through the discussion process. The strength of this outcome is reflected in the post-survey findings that 75% of respondents ($N = 35$) agreed or strongly agreed that discussion improved their ability to “become empowered,” and 68% ($N = 32$) agreed or strongly agreed that discussion improved their ability to “feel a sense of efficacy.”

Students reported that exploring policy solutions related to their community concerns helped them become more concerned and informed citizens. One student stated, “The group discussion each week made me realize that I am not very connected to other people in my neighborhood...I know I need to pay more attention to things that are happening in my community than I did before.” Another student said, “The policies our group proposed gave me a new perspective about what has to happen to change things. I look at the community landscape differently now...I pay more attention. I am more informed.” In-depth examination of community issues and identification of policy solutions using the student-centered discussion process empowered students to consider what they could do to promote social justice in their communities. “Discussing concerns, even though the issues were different for each of us, was enlightening,” stated one student. “The whole experience of talking about how to fix some of the root problems made me more aware of my part in making my community better.”

Findings indicate that reflective discussion on community service motivated students to imagine themselves as change agents within their communities. Several students commented, for

example, that they were reconsidering their career intentions in light of the social justice issues they examined in service and discussion. Some even expressed a desire to pursue community service-related careers. One student said, “Working in [agency name] during the semester, talking about this in my group, reaffirmed my desire to work in this field...it has prepared me to know what to expect and what is possible.” Other students stated that they would pursue working in human services or community service-related fields because they became more committed to addressing a concern encountered in their service learning experience and felt like they could “make a difference.”

The findings also indicate that while some students imagined themselves as change agents in community service-related careers, other students reported gaining a sense of political efficacy that required “looking at the bigger picture”, as one student put it, before deciding what to do to promote social change. Some students commented that reflection on the problems of their communities in group discussion had advanced their belief that solutions to social justice problems required larger acts of policy change, and that the community problems they had identified were too big to change by individual acts of community advocacy or work within a human services agency. These students commented that a career in human services was not for them – either because they had developed a more realistic view of what working in a community setting would be like or because they concluded that community service agencies were too limited in scope to assist people without fundamental policy changes. A student who was interviewed explained:

The whole experience opened up my eyes and made me question my goals. Working at [agency name] and talking with other students in our group made me realize how hard it is for these [clients]...The problems they have are complex. It is not easy to change their situation, to make circumstances better. A lot of times there are so many forces working against them, everything done to help seemed like a Band-Aid. Individuals got help but the big overall picture didn't change for most of them. I didn't realize how difficult it would be.

Another student wrote:

I realize more now how hard it is to make changes in your community. It's going to take more than a few leaders or a big group effort because the problems run so deep. They are complex. Issues are connected to other problems....While you have to start somewhere – you have to do your part – people need to work to change things on a fundamental level. There's a lot to do.

Thus, the findings indicate that the combination of community service and reflective discussion heightened students' sense of civic responsibility. Several students considered becoming change agents in their communities or pursuing human services careers, and others re-evaluated their beliefs about political efficacy. However, while most of the participants in this study reported being empowered, not every participant expressed a commitment to actively pursue social change for social justice, perhaps in some part due to the curricular emphasis on development of students' (inter)personal empowerment. These findings might also reflect, as researchers have noted, that twenty-first century college students tend to be more cynical about the possibility of social change and question their ability to make a difference (Boyle & Whitaker, 2001).

Study outcomes regarding being an empowered collaborator replicate previous research findings showing that critical reflection on service learning through group discussion enhances students' perception of social responsibility (Reeb, Sammon, & Isackson, 1999). Certain skills and their sustained practice are required to effectively participate in community life and research points to the importance of authentic classroom discussion as a precursor to civic engagement (Torney-Purta, 2002).

Discussion

Service learning contextualizes students' learning in real-world situations, developing students' sense of agency to work for societal change, their sense of belonging in their communities, and their cognitive and social competencies (Carver, 1997). The purpose of this study was to examine the effectiveness of the tool of student-centered group discussion for critical reflection on service learning. The aim of analysis was to synthesize a composite picture of the learning outcomes associated with guided reflection on service learning through a student-centered discussion process. Analysis concentrated on quantitative and qualitative reports of changes in student attitudes and beliefs over the course of the semester through the lens of student survey data and written and oral comments.

The major findings of the study are that use of the IF discussion process for critical reflection in a service learning-enhanced course promotes the following changes in student learning:

- increased communication skills, including increased communicative confidence and interpersonal skills
- enhanced critical thinking skills, including enhanced conceptual thinking skills and perspective-taking abilities
- improved collaboration skills, including student management of the learning process and empowerment to act as an agent of social change

Assessment results provide evidence in support of the claim underlying much of the literature on civic education – that service learning-enhanced courses can have a significant effect on student development. More specifically, study findings demonstrate that use of student-centered group discussion as a vehicle for reflection on community service produces measurable significant improvements in student learning. Thus, the findings present a compelling rationale for incorporating the IF discussion process into service learning-enhanced courses as a tool for critical reflection and active learning.

The range of skills, attitudes, and levels of commitment to collaboration expressed by participants in this study underscores the complexity of learning outcomes that can occur in service learning-enhanced courses. While the quasi-experimental nature of the study cannot assure sample representativeness, and caution should be exercised about taking student reports of changed attitudes at face value, it is important to recognize that the quantitative and qualitative findings presented here are supported in large part by previous research findings. Concerns regarding the generalizability of the findings should be viewed in light of the study goals to

provide preliminary scholarly evaluation of the IF discussion process and to provide instructors interested in the transferability of the discussion process to their classrooms with a base of information for implementation and evaluation.

As study findings attest, examining the complexity of real problems in students' communities through the lens of group discussion stretched students' thinking and interpretive frameworks. Findings lend themselves to the conclusion that the student-centered discussion process advanced students' 'conscientization' – the process of becoming "[insightfully aware] of the socio-economic, political, and cultural circumstances which affect their lives as well as their potential capacity to transform that social reality" (Prilleltensky, 1990, p.311). Student learning outcomes also indicate that re-envisioning the Community Psychology course via a group discussion-centered curriculum also opened up possibilities for building students' analytical and communicative skills.

While *what* students learned from their work in the course was an important outcome, *how* students learned was also important. The IF discussion process – a “learning through discussion” approach – shifted student learning from “individual, in-the-head learning to learning as participation in the social world” (Hogan, 2002, p.591). Extant research suggests that students learn best when they are engaged in co-constructing knowledge with other learners, testing knowledge against their prior experiences and examining problems from multiple perspectives. In this light, the IF discussion process proved to be an “active pedagogy” – an approach, in the words of Moser and Hanson (1996), that “involves students actively in their own learning, assures their involvement with the material (i.e., their world), teaches skills for problem-solving rather than instilling information for occasional regurgitation, and prepares students to be engaged citizens and competent participants in society” (p.2).

Findings indicate that it is not only the experience of service learning per se that leads to positive student learning outcomes, but also the nature of the classroom environment supporting reflection on community service that makes it an effective learning context. Taken together, the findings suggest that service learning-enhanced courses should incorporate ample time for reflection via the student-centered discussion process as an integral part of the service learning experience. As Jones (2002) points out, service learning experiences can spark significant development but student growth is not automatic and requires supporting activities that build awareness and empowerment.

The results also suggest that the IF discussion process could be incorporated into other courses across the disciplines, whether or not they are service learning-enhanced, as a means of promoting an active learning environment. Future studies should investigate the impact of the student-centered discussion process on student learning in other courses, especially those in the social sciences and health professions fields where students need to conceptualize and critically evaluate complex social problems and determine their roles as citizens and professionals in the promotion of social justice.

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