



PROJECT MUSE®

---

## Improving Student Outcomes of Community-Based Programs Through Peer-to-Peer Conversation

Joshua J. Mitchell, Kathleen E. Gillon, Robert D. Reason, Andrew J. Ryder

Journal of College Student Development, Volume 57, Number 3, April 2016,  
pp. 316-320 (Article)

Published by Johns Hopkins University Press

DOI: 10.1353/csd.2016.0037



➔ For additional information about this article

<https://muse.jhu.edu/article/615303>

## Improving Student Outcomes of Community-Based Programs Through Peer-to-Peer Conversation

Joshua J. Mitchell   Kathleen E. Gillon   Robert D. Reason   Andrew J. Ryder

Scholars and organizations have called for a renewed emphasis on civic outcomes of higher education such as active citizenship, civic engagement, and social responsibility (Adelman, Ewell, Gaston, & Schneider, 2014; National Task Force, 2012). These and other authors (e.g., Schamber & Mahoney, 2008; Steinberg, Hatcher, & Bringle, 2011) cite student participation in community-based programs (CBP) as a catalyst to the development of these essential civic outcomes. CBP are often formally connected to courses, such as service learning (Jacoby & Ehrlich, 2009) or public scholarship (Cahill & Fine, 2014), but can also be free-standing, such as neighborhood partnerships (Guarasci, 2014; Reason, 2013). Steinberg and colleagues (2011) found that participation in CBP contributed “to a graduate’s ability and sense of responsibility to become an active and engaged citizen” (p. 19).

The importance of reflection and discussion to student learning are common findings within the literature (Mabry, 1998; Steinberg et al., 2011). Schamber and Mahoney (2008), for example, applied Kolb’s experiential learning theory to explore the effects of community-based learning experiences on engaged citizenship and civic development.

They explained that community-based learning experiences engage students in active learning, help students understand how their personal actions affect social issues, and promote students’ civic engagement. The integration of a critical understanding of social issues into community-based experiences should allow students to engage in more meaningful reflection and discussion. Previous studies have shown that service learning, as a civic and academic pedagogy, is more effective when students discuss their experiences with instructors and site supervisors (Mabry, 1998). We did not find any studies that focus on the effect of peer-to-peer discussion as a mechanism to encourage reflection and learning in CBP. The absence of study on peer-to-peer discussion means we might be overlooking an important pedagogical tool to encourage civic outcomes from CBP.

Smith and colleagues (2009) cited a number of studies outside of civic engagement that support the value of peer discussion. Discussion is an effective pedagogical strategy because it engages students with peers and instructors, enhances learning, and promotes understanding. In a study more directly related to civic engagement, Klofstad (2010) found a direct connection between “civic

---

*Joshua J. Mitchell is a doctoral candidate in the School of Education; Kathleen E. Gillon is a postdoctoral research associate; and Robert D. Reason is Professor of Education; each at Iowa State University. Andrew J. Ryder is Assistant Professor of Higher Education at University of North Carolina Wilmington.*

talk” (p. 2353) among peers and increased civic participation, reinforcing our belief that infusing more peer-to-peer discussion into CBP should improve learning and learning environments. We explored how peer-to-peer discussion, as part of CBP, affects two civic outcomes: the importance college students place on contributing to the larger community and their self-reported development of personal and social responsibility.

## THEORETICAL FRAMEWORK

Baker, Jensen, and Kolb (2002) proposed a conversational learning framework, grounded in experiential learning theory, which encouraged researchers to explore the role of discussion within the learning process. Scholars have posited that learning takes place in relationships via communicative processes (Cooks & Scharrer, 2006). Conversation serves as a way to make meaning from experiences and, thus, learn. Creating safe and welcoming spaces that foster good conversation and provide opportunities for reflection is an essential part of the learning process (Baker et al., 2002).

## RESEARCH DESIGN AND METHODS

We used the Personal and Social Responsibility Inventory (PSRI), a nationally available campus climate assessment, for this study. The PSRI, which assesses individual students’ behavior and perceptions of campus climate related to civic learning in higher education, was developed in 2006 as part of the Core Commitments Initiative of the Association of American Colleges and Universities (Dey, Barnhardt, Antonaros, Ott, & Holsapple, 2009). We used data from 12,745 undergraduate students (50% White, 66% female, and 35% college senior) at 19 colleges and universities to answer two primary

research questions, each comprising two parts:

1. How does participation in CBP and engaging in meaningful peer-to-peer discussion affect (a) perceptions of the importance of contributing to a larger community, and (b) development of personal and social responsibility?
2. Do meaningful discussions mediate the effect of CBP on (a) perceptions of the importance of contributing to a larger community, and (b) development of personal and social responsibility?

The outcome variables were created using factor analysis to determine statistically and conceptually related constructs. Both outcome variables use a 5-point scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Perceptions of the importance of contributing to a larger community ( $\alpha = 0.82$ ,  $M = 3.99$ ,  $SD = .77$ ) is comprised of 4 items asking students to rate the importance the campus places on contributing to a larger community. Students’ development of personal and social responsibility ( $\alpha = 0.88$ ,  $M = 3.96$ ,  $SD = .76$ ) is comprised of 7 items asking students to rate the extent to which their experiences on campus increased their sense of personal and social responsibility.

Prior to analysis, we imputed missing data and weighted the sample by students’ sex, class year, and race (White/non-White) to account for nonresponse (Pike, 2007). Blockwise linear regression, in which data are entered in a series of theoretically related blocks, was the primary analytic tool for research Question 1. Entering the variables in blocks allowed us to parse the unique effects of each set of variables. We first entered students’ demographic characteristics (Block 1), followed by variables related to peer-to-peer discussions about the greater good, participation in CBP as part of a course, and participation in CBP outside of courses (Block 2). Items from Block 2 use a 5-point scale

ranging from 1 (*Almost Never*) to 5 (*Almost Always*). We repeated this process for both outcome variables.

The direct effects of CBP on outcome variables are well understood from existing literature; however, we may not have a full understanding of the effects of infusing peer-to-peer discussion into CBP, because some of the total effects of CBP on the outcomes might be indirect through a mediating variable. Mediating variables affect the relationship between predictor and outcomes variables (Baron & Kenny, 1986). Based on our theoretical framework, we hypothesized that peer-to-peer discussion would serve as the mediator variable and increase the positive effects of participation in CBP on the two outcome variables. We, therefore, conducted mediation analysis (Preacher & Hayes, 2008), which allowed us to identify and explain the relationships that exist between and among the predictor (CBP), mediator (peer discussion), and outcome variables (perceptions and development).

## FINDINGS AND IMPLICATIONS

Students who reported more participation in CBP, regardless of whether the CBP was connected to a course, also reported more positive assessments of the importance of contributing to community and greater development of personal and social responsibility. Peer-to-peer discussion and participation in CBP were significant predictors of students' perceptions of the importance of contributing to community ( $R^2 = .182$ ,  $R^2\Delta = .162$ ,  $p < .001$ ). The inclusion of these variables accounted for 18.2% of the variance in perceptions of the importance of contributing to community, 16.2% more variance than demographics alone. Meaningful discussion with peers was the greatest predictor of importance placed on contributing to a larger community ( $\beta = .237$ ).

Engaging in meaningful discussions with peers and participating in CBP also significantly predicted students' development of personal and social responsibility ( $R^2 = .192$ ,  $R^2\Delta = .175$ ,  $p < .001$ ). Including peer-to-peer discussion and participation in CBP accounted for 19.2% of the variance in development of personal and social responsibility, 17.5% more variance than demographics alone. Meaningful discussion with peers was the most powerful predictor of students' development of personal and social responsibility ( $\beta = .269$ ).

The results of the mediation analysis (Table 1) indicated that peer-to-peer discussions served as a mediator between participation in CBP and both outcome variables. That is to say, the positive influence of participating in CBP was stronger when students also engaged in peer-to-peer discussion. The addition of peer-to-peer discussion accounted for a 42% to 58% positive change in the effects of CBP on the outcome variables; including peer-to-peer discussions as part of CBP magnifies the effects of CBP on the importance of contributing to community and students' development of personal and social responsibility. The effect is in addition to the positive effects of participating in CBP and occurs regardless of students' race, sex, or class year.

Our findings indicate that educators should consider how they could intentionally infuse meaningful peer-to-peer discussions into CBP and related experiences. For example, educators should include meaningful discussions with peers as a formal learning exercise following community-based experiences, including service learning or neighborhood partnerships.

Our findings suggest that educators should remove obstacles to peer-to-peer discussions. Welcoming spaces, where students feel comfortable engaging in conversation, aid in meaningful discussions and allow students to converse, construct meaning, and create knowledge. As a means of promoting

TABLE 1.  
Effects of CBP on Outcome Variables Through Peer-to-Peer Discussion  
(*N* = 12,745)

Effect	Estimate	SE	<i>t</i>	95% Bias-Corrected CI
<i>Effects of CBP<sub>i</sub> on contributing to community</i>				
Total	.1911	.0053	36.1119***	
Direct	.1108	.0057	19.3869***	
Indirect	.0804	.0032		[.0744, .0866]
<i>Effects of CBP<sub>o</sub> on contributing to community</i>				
Total	.1910	.0052	36.6332***	
Direct	.0990	.0060	16.5732***	
Indirect	.0920	.0038		[.0848, .0996]
<i>Effects of CBP<sub>i</sub> on PSR</i>				
Total	.1997	.0052	38.4117***	
Direct	.1163	.0056	20.8092***	
Indirect	.0834	.0031		[.0775, .0897]
<i>Effects of CBP<sub>o</sub> on PSR</i>				
Total	.1789	.0052	34.5362***	
Direct	.0753	.0059	12.7968***	
Indirect	.1038	.0038		[.0963, .1114]

Note. CBP<sub>i</sub> = connected to a course; CBP<sub>o</sub> = not connected to a course.

\*\*\**p* < .001.

intentional discussions, institutional resources should provide pedagogical support for educators, including training on how to employ effective reflection and discussion questions. Moreover, CBP should allow students to engage critically with community issues as a way to enhance the subsequent discussion and reflection. Students should apply their heightened understanding of social issues, which they integrated into their community-based experience, to engage in more structured reflection and meaningful discussion.

### Future Directions

Future studies could examine discussion and reflection practices related to CBP to identify good practices for promoting learning and discussion. Future research could examine

where discussion occurs—in a structured environment connected to the CBP or later with peers in an informal setting. Because our mediator variable only provided partial mediation, our findings suggest the possibility of additional mediator variables that could be explored through future research.

### CONCLUSION

Previous scholarship established the relationship between CBP and civic outcomes (Steinberg et al., 2011) as well as the importance of students' discussions with instructors and site supervisors in strengthening outcomes of CBP (Mabry, 1998). We found no research, however, into the effects of peer-to-peer discussions on the civic learning outcomes of

CBP, leaving a gap in understanding about a potentially powerful pedagogical technique. Our findings indicate that incorporating peer-to-peer discussion magnified the effects of CBP on two essential civic learning outcomes: the importance students place on contributing to a larger community and students' development of personal and social responsibility. As educators reengage with the civic mission of higher education, especially

the promotion of civic learning outcomes through community-based experiences, they should infuse peer-to-peer discussions into their pedagogical practices as a means to effectively promote learning.

---

*Correspondence concerning this article should be addressed to Joshua J. Mitchell, E005 Lagomarcino Hall, 901 Stange Road, Iowa State University, Ames, IA 50011; jjm1@iastate.edu*

## REFERENCES

- Adelman, C., Ewell, P., Gaston, P., & Schneider, C. G. (2014). *The Degree Qualifications Profile 2.0: Defining US degrees through demonstration and documentation of college learning*. Indianapolis, IN: Lumina Foundation.
- Baker, A., Jensen, P. J., & Kolb, D. A. (2002). *Conversational learning: An experiential approach to knowledge creation*. Westport, CT: Quorum Books.
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Cahill, C., & Fine, M. (2014). Living the civic: Brooklyn's Public Scholars. In J. N. Reich (Ed.), *Civic engagement, civic development, and higher education: New perspectives on transforming learning* (pp. 67-72). Washington, DC: Bringing Theory to Practice.
- Cooks, L., & Scharrer, E. (2006). Assessing learning in community service learning: A social approach. *Michigan Journal of Community Service Learning*, 13(1), 44-55.
- Dey, E. L., Barnhardt, C. L., Antonaros, M., Ott, M. A., Holsapple, M. A. (2009). *Civic responsibility: What is the campus climate for learning?* Washington, DC: Association of American Colleges and Universities.
- Guarasci, R. (2014). Civic provocations: Higher learning, civic competency, and neighborhood partnerships. In J. N. Reich (Ed.), *Civic engagement, civic development, and higher education: New perspectives on transforming learning* (pp. 59-62). Washington, DC: Bringing Theory to Practice.
- Jacoby, B., & Ehrlich, T. (2009). *Civic engagement in higher education: Concepts and practices*. San Francisco, CA: Jossey-Bass.
- Klofstad, C. A. (2010). The lasting effect of civic talk on civic participation: Evidence from a panel study. *Social Forces*, 88, 2353-2376.
- Mabry, J. B. (1998). Pedagogical variations in service-learning and student outcomes: How time, contact, and reflection matter. *Michigan Journal of Community Service-Learning*, 5, 32-47.
- National Task Force on Civic Learning and Democratic Engagement. (2012). *A crucible moment: College learning and democracy's future*. Washington, DC: Association of American Colleges and Universities.
- Pike, G. R. (2007) Adjusting for nonresponse in surveys. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research*, Vol. 22 (pp. 411-449). Dordrecht, The Netherlands: Springer.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40, 879-891.
- Reason, R. D. (2013). Infusing social responsibility into the curriculum and cocurriculum: Campus examples. In R. D. Reason (Ed.), *New Directions for Higher Education: No. 164. Developing and Assessing Personal and Social Responsibility in College* (pp. 73-82). San Francisco, CA: Jossey-Bass.
- Schamber, J. F., & Mahoney, S. L. (2008). The development of political awareness and social justice citizenship through community-based learning in a first-year general education seminar. *Journal of General Education*, 57, 75-99. doi:10.1353/jge.0.0016
- Smith, M. K., Wood, W. B., Adams, W. K., Wieman, C., Knight, J. K., Guild, N., & Su, T. T. (2009). Why peer discussion improves student performance on in-class concept questions. *Science*, 323(5910), 122-124.
- Steinberg, K. S., Hatcher, J. A., & Bringle, R. G. (2011). Civic-minded graduate: A north star. *Michigan Journal of Community Service Learning*, 18(1), 19-33.