

The Effects of Community Service Experience,
Student Attitudes, & Class Climate on the Level of
Political Knowledge

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There are strong arguments within Political Science supporting a connection between education and political knowledge acquisition. Although there is strong evidence connecting education, specifically civic education courses, and increases in political knowledge, the variables that impact the acquisition are less well understood. Prior community service experiences, student attitudes toward government, specifically trust in government and student interest in politics and government, and the climate of the class impact the individual level of political knowledge of late middle level students. Community service experiences allow for real world connections to be made between issues student care about and the functions of government and politics presented in courses. Student attitudes toward politics and government affect whether course material is deemed relevant and important enough to select for retention. Democratically constructed classroom climate encourage students to grapple with diverse views and positively impacts the level of political knowledge.

There is a long debate about the apparent lack of political knowledge among Americans. Images of Americans who cannot correctly answer basic questions about government are fodder for popular late night comedy sketches. It is generally understood that civic education is necessary for the “development of an informed, effective, and responsible citizenry” and without a strong commitment to creating a well informed citizenry, the success of a strong and free society is doubtful (Branson and Quigley 1998). Previous studies have

shown a connection between general formal education and individual's level of political knowledge (Delli Carpini and Keeter 1996; Nie, Junn, and Stehlik-Barry 1996) and others have looked at the impact of civic education courses on political knowledge (Niemi and Junn 1998). Although, there are arguments connecting civic education with the acquisition of political knowledge, what happens inside the black box of education is not understood very well. What variables affect the level of political knowledge of an individual?

Niemi and Junn (1998) argue that students acquire political knowledge in a two step process. First, the material must be presented to the student in some manner such as in civic education course or through their daily life. Second, student must select the information for retention. Students choose to retain the information based on the perceived usefulness of the material. The two-part process means that an examination of the variables within courses must look at how the material is presented and what attributes within students lead them to select material for retention.

Students who have prior exposure to topics in government and politics from community service experiences will be more likely to find material in civic education courses relevant. There is a long list of studies that connect community service experience and knowledge. Mary Hepburn (1997) found a long history of research contending that local community involvement created a positive impact on political knowledge instruction dating as far back as 1907. Hamilton and Zeldin (1987) found a direct link between community service experience and

increases in political knowledge. Markus, Howard, and King (1993) found community service activities integrated within introductory political science courses helped to improve student learning of material in the course by assisting students to view the information as relevant and important. Clark, Croddy, Hayes, and Philips (1997) found that community service involvement provides a place to apply knowledge and make real world connection. Parker-Gwin and Mabry (1998) found that community services experiences gave opportunities for critical reflection on the connection between political knowledge and the experience. Niemi, Hepburn, and Chapman (2000) found that sustained involvement by high school students in community service activities positively impacted individual levels of political knowledge. The ability to make real world connections through community service experience seems to improve the likelihood that individual students will choose to select political information for retention.

Student interest and attitudes toward government and politics also affects the likelihood that individual students will select political knowledge for retention. It is commonly understood by most educators that students who are more interested in the material of a course tend to show evidence of better learning than students who are not as interested. Studies looking at the connection between interest and learning seem to indicate this common belief is sound. Weber, Martin, and Cayanus (2005) argue there are three distinct dimension to student interest in relation to a topic. They describe the dimensions

as *meaningfulness*, *impact*, and *competence*. *Meaningfulness* consists of how valuable the material is to the student. When the knowledge is more meaningful to the individual, that person will tend to work harder to master it. *Impact* is related to how much of a difference the acquisition of the material will make for the individual. The greater the impact of the knowledge to the individual, the greater interest the individual will have in the material. Lastly, *competence* connects how individuals evaluate their own abilities in grasping the material. The authors contend that individuals who feel competent or have had prior experience will tend to be more interested in the topic.

The use of *interest* as a variable shows up often in a variety of disciplines outside of political science when examining variables involved in student achievement. Perkins, Gratny, Adams, Finkelstein, and Wieman (2006) found that students with a greater interest in physics tended to not only perform better in physics course work but also were more likely to rate themselves as proficient in the material. Horn and Walberg (1984) similarly found that student achievement in high school mathematics courses seemed to be a function of student interest as well as the amount of coursework. These authors did not account for any connection between interest and the amount of course work students choose to take though. A Norwegian study of internet-based learning activities found that student interest in the activity impacted individual student performance in the activity (Bråten and Strømsø 2006). Byron Waller (2006) used student interest as an independent variable in his study mathematics course

choices of non-traditional African-American college students and found that self-efficacy in Math was strong predictor of course choice. Lawless and Kulikowich (2006) argue that individual interest serves as a motivating factor to acquire more knowledge in a topic area even when the individual already possesses high levels of knowledge. Interest in politics and government, can be argued, is a type attitude toward politics and government. This means that attitudes about the material can have an impact on whether a student selects information to retain. Consequently, it seems reasonable to take in consideration a student's attitudes at a more general level like how trusting the student is in government.

There is a strong argument made in the literature connecting courses that create a democratic or open class climate and higher levels of knowledge. Democratic classroom climate can be defined as coursework, daily class activities, and assignments where students are encouraged to investigate and express diverse views on social issues (Hahn 1999). Niemi and Junn (1998) specifically call for coursework that encourages students to grapple with the controversial nature of politics as a means to reform the state of civic education. In separate studies, Ehman (1969; 1980) found that the use of open class climate methods as a means to investigate political topics had a positive impact on political knowledge. Hahn (1999) found in a study of six nations, including the United States, that as courses employed more democratic class climate practices levels of political knowledge increased as well. McDevitt and Kiouisis (2006) argue for a notion they describe as deliberative learning where discussion and

opinion validation (components of open class climate) help to build skills including knowledge competence for civic participation. Additionally, they found that using deliberative learning techniques help to make students more receptive to future learning. These techniques are especially useful with middle level student to promote the acquisition of political learning later in high school and college. Along those lines, a review was undertaken of the Florida middle school social studies curriculum looking at how civic education is addressed (Doyle and Shenkman 2006). The case study argued that the current approach to civic education where student might take a one semester course in high school is “too little, too late.” The authors state the middle school curriculum is an excellent opportunity to engage students using open classroom climate methods to increase political knowledge. Ahmad (2006) argues courses that focus on just teaching factual information and ignore competing ideas hamper student learning. In a study of pedagogies in general education courses and their impact on civic engagement, use of the democratic class climate approach and community service was found positively impact student learning outcomes (Spiezio, Baker, and Boland 2005). These studies seem to support the notion that the use of democratic or open class climate techniques and methods has a positive impact on students’ level of political knowledge.

Based on this survey of the literature, I hypothesize students with community service experience, more trusting of government and more interested in politics and government, and experience courses that utilize democratic class

climate techniques and methods will exhibit higher levels of political knowledge. To test this hypothesis, I will use data from the 1999 IEA Civic Education Study. The study distributed questionnaires to 2188 ninth grade students in the fall of 1999. Students were asked to answer a series of factual knowledge questions about American government. The questionnaire also asked students to indicate prior community service experiences ranging from student government to volunteering. Students were asked about their interest in government and politics along and to rate how trusting they were in various institutions in society including different aspects of government. Additional questions asked students to report the types of class activities in civic education courses including whether the course used lecture, discussion, and other methods and techniques.

The variables for this analysis were either taken directly from the data set or as a scale score based directly on the dataset. Table 1 provides the descriptive statistics for each of the variables. The dependent variable is based on the total number of correct answers students gave on the eleven factual knowledge questions. Most students answer about half of the questions correctly. The community service score was derived from the number of different community service activities students indicated they participated. The mean number of community service experiences was just over four and most were between one experience and six. The interest in government and politics score is a scale build on four questions where students indicated their interest on a four-point scale. The mean score was just over six and a half what a standard deviation of just

under two and a half. The trust in government score was similarly constructed from six questions asking students to relate their feelings of trust on a four-point scale. Students seemed to be fairly trusting with a mean score of 18.11 and most were between fifteen and twenty-one. The score for class climate was constructed from ten questions about the types of activities and classroom management methods employed in their civic education course. Students were asked to rate how often each example occurred on a four-point scale. Courses that were more democratic or open scored higher on the scale. The mean score was 10.51 and had a standard deviation of 2.27. Lastly, fifty-six of the respondents were female.

Table 1: Descriptive Statistics for Factual Knowledge Score, Community Service Score, Interest in Government and Politics Score, Trust in Government Score, Class Climate Score, and Gender

	Mean	Standard Deviation	N
Total Correct Answers	5.85	2.70	1844
Community Service Score	4.38	2.82	1844
Interest Score	6.52	2.44	1844
Trust Score	18.11	3.61	1844
Class Climate Score	10.51	2.27	1844
Gender	.56		1844

Source: 1999 IEA Civic Education Study

Note: N for this study is lower than the total number of cases due to missing cases.

The bivariate relationship among the variables needs to be considered. Table 2 presents the correlation matrix for the four independent variables along with the dependent variable. The bivariate relationship between the independent variable with each dependent variable was examined first. The bivariate correlation analysis confirms the predictions made from the literature. All of the independent variables are positively correlated to the total number of correct answer on the factual knowledge questions. As the amount of community service

experiences increased for a student, the student tends to answer more factual knowledge questions correctly. The relationship between the total number of correct answers and the community service score shows a Pearson's r of .175. Though the relationship is not overly strong, the relationship exists and appears to be statistically significant. The next strongest relationship with the total number of correct answers is the class climate score. This relationship is statistically significant as well. The trust score and interest score were found to have weaker correlations with the total number of correct answers but were still statistically significant. Only the relationship between gender and the total number of correct answers was not statistically significant. Although the relationship between gender and the total number of correct answers was not statistically significant, it should be retained with the other variables for a fuller OLS regression analysis to provide as clear of a model as possible.

Next, the bivariate relationship between each of the independent variables should be examined. Surprisingly, the correlation between gender and the rest of the independent variables was not found to be statistically significant either except for interest. The negative correlation between gender and the interest score shows that male respondents were slightly more interested in politics and government than female respondents. Finding a good explanation for why males showed slightly higher interest scores is difficult. Whether the particular age of the respondents plays a role in this difference is unclear given the data set withholds age for each case making controlling for age impossible. Also, the

questionnaire was given to ninth grade students, severely limiting the amount of variation an age variable would provide and any attendant analysis. The relationship between the class climate score and the trust score also stands out. Research by Lauren Holland may provide an explanation, at least indirectly. Holland found that students in diversity courses were more likely to be receptive of the teaching of democratic ideals like tolerance for differing view points when the instructor practiced democratic or open class climate methods (Holland 2006). Holland was not specifically looking at the impact of democratic class climate practices on attitudes of trust in government but there is connection between increased level of trust in government and civic education (Niemi and Junn 1998). It might be argued that democratic class climate methods and techniques have an impact on attitudes of trust in government. This relationship seems to warrant further study.

Table 2: Correlation Matrix for Factual Knowledge Score, Community Service Score, Interest in Government and Politics Score, Trust in Government Score, Class Climate Score, and Gender

	Total Correct	Community Service Score	Interest Score	Trust Score	Class Climate Score	Gender	
Total Correct	1.00						
Community Service Score	.175 <.001**	1.00					
Interest Score	.122 <.001**	.156 <.001**	1.00				
Trust Score	.133 <.001**	.072 .002**	.136 <.001**	1.00			
Class Climate Score	.175 <.001**	.126 <.001**	.103 <.001**	.308 <.001**	1.00		
Gender	.019 .209	.036 .063	-.047 <.001**	-.030 .101	-.005 .422	1.00	N=1844

Source: 1999 IEA Civic Education Study

Note: Correlations are presented as Pearson's *r* values.

p<.05*

p<.01**

The bivariate correlation analysis confirmed findings in the literature but the interaction of the independent variables together with the total number of correct answers to the factual knowledge questions needs consideration. Assuming each of the independent variables impact the dependent variable additively, an OLS regression analysis is appropriate. Table 3 presents the results from multivariate regression analysis. The overall model explains almost eight percent of variation in the dependent variable by all the independent variable. Given the multitude of variables that impact learning, being able to explain as much of the variation in the total number of correct answers with just four variations is surprisingly positive. The model is also statistically significant allowing for the null hypothesis, that these independent variables do not impact the total number of correct answers in the population, to be safely rejected.

Each of the independent variables from the hypothesis has a positive impact on the total number of correct answers on the factual knowledge questions. Gender, as a variable, stands out not only because of its weak impact but also because it was not statistically significant. Looking at the standardized slope coefficients, the class climate score had the strong impact the total number of correct answers. Substantively this means that students who experience more democratic class climate methods and techniques tend to answer more factual knowledge questions correctly when controlling for the other variables in the analysis. The next strongest impact came from community service experience.

The two measures of attitudes, trust in government and interest in government and politics, had the weakest impact on the total number of correct answers but effect remained statistically significant. Lastly, the constant provides interesting insight into these variables. Without the effect of any of the independent variables and being male, a student would answer about two questions correctly or eighteen percent. The mean number of correct answers was roughly fifty percent. These variables help explain how students are able to answer correctly roughly thirty-two percent or close to four more out of eleven questions.

Table 3: Multivariate analysis for Community Service Score, Interest in Government and Politics Score, Trust in Government Score, Class Climate Score, and Gender

	Unstandardized Coefficients		Standardized Coefficients	<i>t</i> -test	Sig.
	B	Std. Error	<i>Beta</i>		
Constant	1.76	.387		4.558	<.001**
Community Service Score	.131	.022	.137	5.980	<.001**
Interest Score	.084	.025	.076	3.327	.002**
Trust Score	.047	.018	.062	2.625	.009**
Class Climate Score	.199	.028	.167	7.049	<.001**
Gender	.058	.065	.020	.901	.368
R ² =.077 F-test=30.852					
SEE= 2.594 Sig. <.001** N=1844					

Source: 1999 IEA Civic Education Study

Note: Dependent Variable- total number of correct answers on factual knowledge questions

p<.05*

p<.01**

The OLS multivariate regression analysis provides evidence of the importance of students' prior community service experiences, attitudes like trust in government and interest in government and politics, and the type of class climate students receive instruction in civic education even when controlling for the gender of students. The analysis helps to confirm the importance of the type

of class climate constructed in courses that teach civic knowledge. Additionally, community service experience seems to help student select political knowledge for retention. The analysis provides support that attitudes about government and politics needs further consideration and research.

The dataset itself does put some limitations on the strength of the conclusions from the data analysis. First, the questionnaire measured the level of political knowledge students had at the time of the survey. It did not provide a means to directly measure change in political knowledge due to the independent variables. Second, the dataset does not provide a useful way to control for socio-economic status due to privacy concerns. Even with these caveats, the relationship does exist between the independent variables and the dependent variables and was found to be statistically significant. The conclusions provide a strong argument to try to directly measure a change in the level of political knowledge from the independent variables. The use a pre-test/post-test of factual knowledge along with measures for prior experience, attitudes, and class climate would solve the sources of weakness in this analysis. The pre-test/post-test should also include more than eleven total questions in order to more precisely measure the impact of the independent variables. The pre-test/post-test should also attempt to more close examine the role of attitudes as an independent variable to political knowledge acquisition.

The findings of this analysis help to contribute to the understanding of the variable associated with political knowledge acquisition. Understanding these

variables is important for at least two reasons. First on a practical level, having a stronger theoretical understanding of the learning processes of students helps educators at any level make better judgments about the types of methods and techniques that are employed in courses. Understanding that prior experience and democratic class climate along with the attitudes of students allow instructors to more carefully choose what to include in coursework and how to include it. Second, the viability of our political system is rooted in how knowledgeable the citizenry are. Any means to increase the knowledge base of citizens, regardless of the arguments about the current level of knowledge, only serves to strengthen the system. Any positive impact can only truly be felt as a result of concerted, large-scale adoption over time of best practices rooted in the better understanding of the interplay of these variables on students.

References

- Ahmad, Iftikhar. 2006. Teaching Government in Social Studies: Political Scientists' Contributions to Citizenship Education. *The Social Studies* 97 (1):8-15.
- Branson, Margaret Stimmann, and Charles N. Quigley. 1998. The Role of Civic Education. E. Position Paper & Case Studies: The Communitarian Network/ The George Washington University Institute of Communitarian Policy Studies.
- Bråten, Ivar , and Helge I Strømsø. 2006. Epistemological Beliefs, Interest, and Gender as Predictors of Internet-based Learning Activities. *Computers in Human Behavior* 22 (6):1027-1042.
- Clark, Todd, Marshall Croddy, William Hayes, and Susan Philips. 1997. Service Learning as Civic Participation. *Theory into Practice* 36 (3):164-169.
- Delli Carpini, Michael X., and Scott Keeter. 1996. *What Americans Know About Politics and Why It Matters*. New Haven Conn.: Yale University Press.
- Doyle, John, and Stephen C. Shenkman. 2006. Revitalizing Civic Education: A Case Study. *The Florida Bar Journal* 80 (7):31-35.

- Ehman, Lee H. 1969. An Analysis of the Relationships of Selected Educational Variables with the Political Socialization of High School Students. *American Educational Research Journal* 6 (4):559-580.
- Ehman, Lee H. 1980. The American School in the Political Socialization Process. *Review of Educational Research* 50 (1):99-119.
- Hahn, Carole L. 1999. Citizenship Education: An Empirical Study of Policy, Practice, and Outcomes. *Oxford Review of Education* 25 (1&2):231-250.
- Hamilton, Stephen F., and R. Shepherd Zeldin. 1987. Learning Civic in the Community. *Curriculum Inquiry* 17 (4):407-420.
- Hepburn, Mary A. 1997. Service Learning in Civic Education: A Concept with Long, Sturdy Roots. *Theory into Practice* 36 (3):136-142.
- Holland, Lauren. 2006. Teaching and Learning in Diversity Classes: The Significance of Classroom Climate and Teacher Credibility. *Journal of Political Science Education* 2 (2):187-203.
- Horn, Elizabeth A, and Herbert J. Walberg. 1984. Achievement and Interest as Functions of Quality and Level of Instruction. *Journal of Educational Research* 77 (4):277-233.
- Lawless, Kimberly A., and Jonna M. Kulikowich. 2006. Domain Knowledge and Individual Interest: The Effects of Academic Level and Specialization in Statistics and Psychology. *Contemporary Educational Psychology* 31 (1):30-43.
- Markus, Gregory B., Jeffrey P. F. Howard, and David C. King. 1993. Integrating Community Service and Classroom Instruction Enhances Learning: Results From an Experiment. *Educational Evaluation and Policy Analysis* 15 (4):410-419.
- McDevitt, Michael, and Spiro Kiousis. 2006. Deliberative Learning: An Evaluative Approach to Interactive Civic Education. *Communication Education* 55 (3):247-264.
- Nie, Norman H., Jane Junn, and Kenneth Stehlik-Barry. 1996. *Education and Democratic Citizenship in America*. Chicago: University of Chicago Press.
- Niemi, Richard G., Mary A. Hepburn, and Chris Chapman. 2000. Community Service by High School Students: A Cure for Civic Ills? *Political Behavior* 22 (1):45-69.
- Niemi, Richard G., and Jane Junn. 1998. *Civic Education: What Makes Students Learn*. New Haven: Yale University Press.
- Parker-Gwin, Rachel, and J. Beth Mabry. 1998. Service Learning as Pedagogy and Civic Education: Comparing Outcomes for Three Models. *Teaching Sociology* 26 (4):276-291.
- Perkins, K. K., M. M. Gratny, W. K. Adams, N. D. Finkelstein, and C. E. Wieman. 2006. Towards Characterizing the Relationship Between Students' Interest In and Their Beliefs About Physics. Paper read at American Institute of Physics Conference Proceedings, at Colorado.
- Spiezio, Kim E., Kerrie Q. Baker, and Kathleen Boland. 2005. General Education and Civic Engagement: An Empirical Analysis of Pedagogical Possibilities. *The Journal of General Education* 54 (4):273-292.

- Waller, Byron. 2006. Math Interest and Choice Intentions of Non-Traditional African-American College Students. *Journal of Vocational Behavior* 68 (3):538-547.
- Weber, Keith, Matthew M. Martin, and Jacob L. Cayanus. 2005. Student Interest: A Two-Study Re-examination of the Concept. *Communication Quarterly* 53 (1):71-86.