



Journal of the Indiana Academy of the Social Sciences

Volume 16

Article 5

August 2013

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*Predicting Voting Likelihood in a Sample of
Indiana University Northwest Students¹*

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ABSTRACT

The Indiana Civic Health Index (INCHI) recently reported some noteworthy statistics regarding voting turnout, civic engagement, social connectedness, and volunteerism in the Hoosier state. Using survey results of 300 students registered to vote at Indiana University Northwest conducted by a SPEA graduate statistics class, the present study compares the INCHI results to those at Indiana University Northwest. Then, applying a social capital framework, voting likelihood is predicted based upon civic engagement, social connectedness, and volunteerism, holding demographics constant. The results reveal a higher than average voting turnout in 2008 and 2010, higher levels of civic engagement, volunteerism, and social connectedness to strong bonds yet also finds students being less likely to eat dinner frequently with family and/or friends and having weak social ties with neighbors. Logistic regression reveals only one factor—discussing politics daily—to be a significant predictor of voting likelihood in both the 2008 and 2010 elections, while belonging to 4 types of civic groups significantly predicted voting in 2010. These results are consistent with previous research that questions the link between measures of civic engagement and voting likelihood. This work concludes by discussing improving the weak ties of students and increasing the frequency with which politics is discussed within the campus community.

KEY WORDS Voting Behavior; Civic Engagement; Volunteerism;
Social Connectedness; Social Capital

On November 4, 2008, Barack Obama became the first Democratic candidate to carry the state of Indiana since Lyndon Johnson in 1964. Obama won by less than one percentage point (50 percent–49 percent) over John McCain, equating to a 28,391 vote

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difference out of 2,751,054 ballots cast (Indiana Division of Elections 2008). As with any election, turnout was a key factor in that race. Despite the high stakes and the historic nature of the election, just 40 percent of registered Hoosiers turned out to vote in the primary, and 61 percent turned out for the general election (Indiana Division of Elections N.d.), which represented 57 percent of the voting-age population (US Election Project 2008). This stands in contrast to the 79.6 percent of registered voters that turned out in 1964, which represented 73.5 percent of the voting-age population in Indiana (Indiana Division of Elections N.d.). For the 2010 statewide midterm election, 41 percent of registered Hoosiers turned out to vote (Indiana Division of Elections N.d), which represented just 37 percent of the voting-age population. This is contrasted with the 70.6 percent registered voter turnout representing 63.5 percent of the voting-age population in the 1962 midterms (Indiana Division of Elections N.d.). Voter participation, the cornerstone of a healthy democracy, is clearly a matter of important concern within the state of Indiana.

Figures 1–3 (from data on the Indiana Division of Elections Web site) below display the level of voting participation among registered voters in Indiana midterm and general elections from 1962 to 2010 and in primary elections from 1990 to 2010. The general trend is a decline in voter turnout, specifically after 1992 in the general elections and after 1994 for the midterm elections, and though there has been a slight uptick in each over the past three election cycles, these figures are much lower than historic turnout in the state. With the exception of 2008, primary turnout has followed a similar trend.

Figure 1. Indiana Midterm Election Registered Voter Turnout by Year, 1962–2010

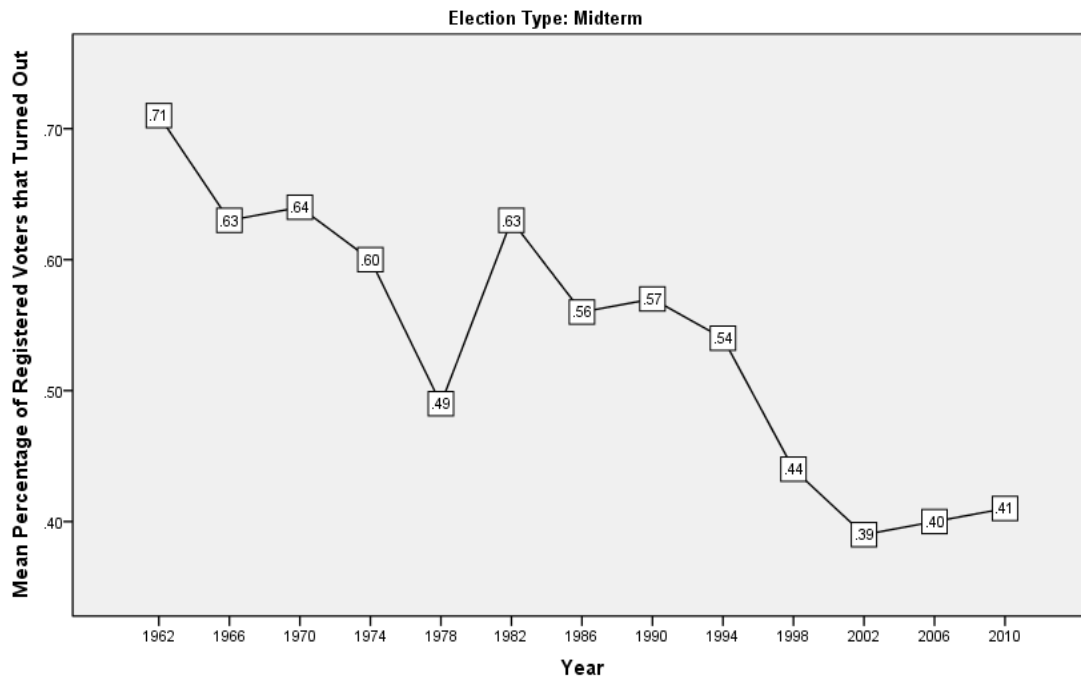


Figure 2. Indiana General Election Registered Voter Turnout by Year, 1964–2008

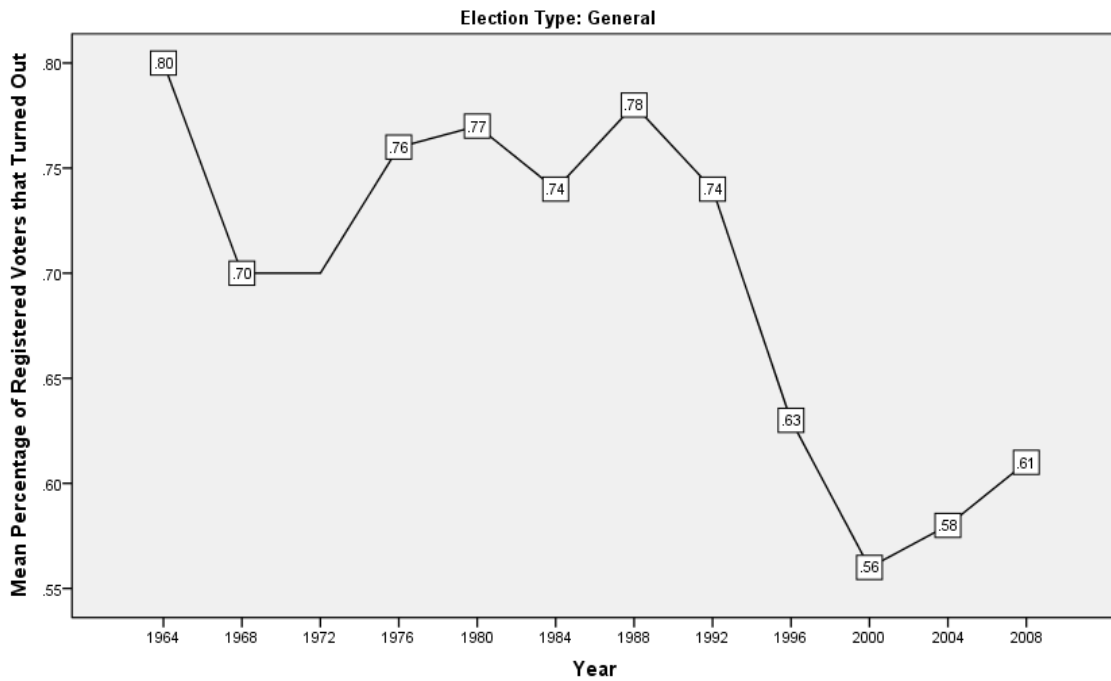
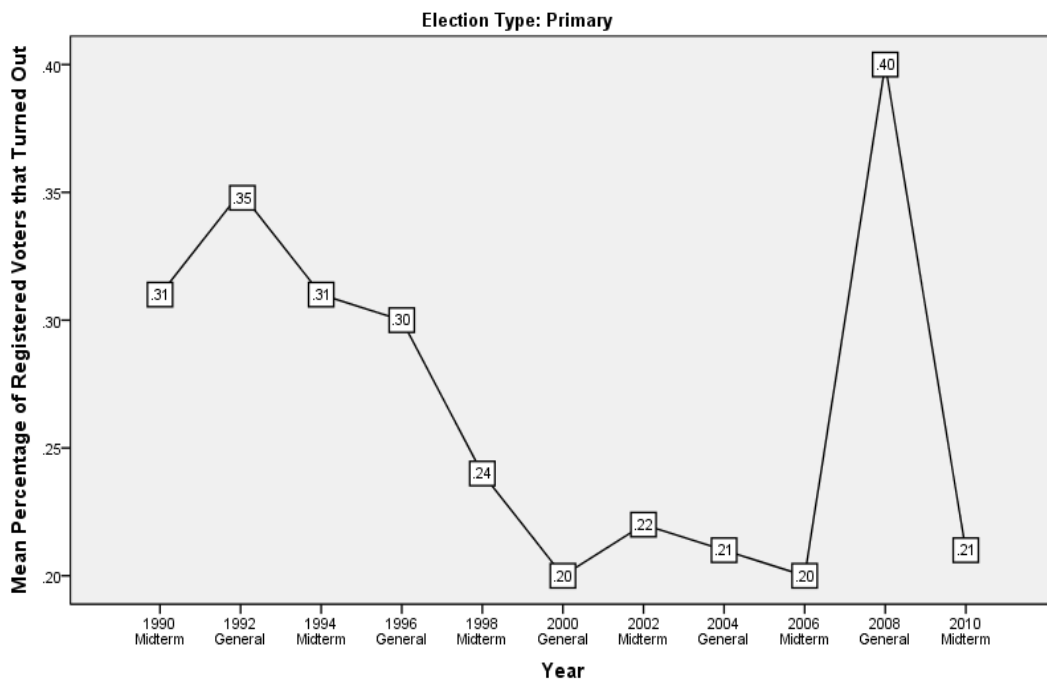


Figure 3. Indiana Primary Election Registered Voter Turnout by Year, 1990–2010



As shown by the historic data presented here, voting participation in Indiana has been generally declining over time and in a more pronounced manner since the early to mid-1990s. It is within this context that a large statewide working group created the Indiana Civic Health Index (INCHI 2011) to explore civic life and participation in Indiana. The present study provides an overview of that important work and develops a theoretical framework for the integrated study of the variables utilized to analyze the civic health of Indiana. Further, based on the INCHI project, a graduate class at Indiana University Northwest surveyed their peers to determine the level of voting participation, civic engagement, social connectedness, and volunteerism among this specific population. The origins of the project are discussed, as are the results and implications of these two important research questions:

1. What are the voting behaviors of Indiana University Northwest students?
2. What factors of civic health most strongly and significantly predict these voting behaviors?

Indiana Civic Health Index

The Indiana Civic Health Index (INCHI 2011) is a report that compares the level of civic participation in Indiana to that of other states. Various political and nonpolitical civic activities such as voting (voter registration and turnout), volunteerism, group membership in civic organizations, and social connectedness are measured and ranked relative to other states. This information provides a snapshot of the current condition of Hoosiers' civic engagement, serving to quantify Indiana's civic health and to initiate discussions to promote civic participation throughout the state through a free press and secondary and college educations.

INCHI used secondary data, mainly from from the U.S. Census Bureau's Current Population Survey (CPS), to examine Indiana's civic health. The report finds Indiana ranked 43rd in voter registration (65.1 percent of eligible Hoosiers are registered to vote) and 48th in voter turnout (only 39.4 percent of registered voters voted in the last state election). Regarding community involvement, Indiana ranked 32nd among all states for volunteering and 21st for group membership. While Hoosiers ranked 17th for having strong connections to their families (90 percent of people eat dinner with their families at least a few times a week), their ties to other community members are much weaker, as residents ranked 45th in the country for working with neighbors to solve community problems (INCHI 2011). Though 33 percent of Hoosiers hold at least a two-year degree, the report finds that 45 percent of Indiana residents report not discussing politics at all. These results, combined with the earlier voting turnout trends, point to this being an important discussion started by the Indiana Civic Health Index coalition.

There are also some weaknesses with the report that the present study seeks to build on in support of continuing the conversation started by INCHI. First, the results were simply reported and not utilized in any statistical analyses to determine the significance of any relationship between the variables. This is an important step if the

goal is to change some of the poor outcomes stated in the report. Along these lines, the report presents measures without really developing any type of theoretical framework for how they would relate to one another. While important for the purpose it serves, the INCHI discussion is continued and extended here through an application of a theoretical framework to structure the measures—Putnam’s social capital theory—and the use of statistical techniques to determine the statistical relationship between civic engagement, social connectedness, volunteerism, and voting behavior.

Literature Review and Theoretical Framework

Upon reading the first few pages of the Indiana Civic Health Index (2011), one is immediately reminded of *Bowling Alone* by Robert Putnam (2000), which discusses voting, education, civic engagement, volunteerism, and social connectedness in depth from the perspective of social capital and the decline of traditional community in the United States. *Bowling Alone* is a history of social capital in the United States, especially in the important post-WWII era contrasted with more modern times. Putnam focuses not only on social bonding (how heavily people are involved in social groups) or social bridging (how many groups people belong to) but also on their impact on the individual as well as on community and society. The work paints a dim picture of social capital in America, with both bonding and bridging being reduced over time, with consequences on individual, community and societal health, victimization, and engagement. The return to a community approach thus represents an attempt to reestablish some of this lost capital.

Relating directly to INCHI, Putnam discusses political participation in the second chapter of *Bowling Alone*, with a specific focus on voting. In establishing the relationship between the measures used by INCHI, Putnam notes, “Voters are more likely to be interested in politics, to give to charity, to volunteer, to serve on juries, to attend community school board meetings, to participate in public demonstrations, and to cooperate with their fellow citizens on community affairs” (p. 35). The directionality of this relationship is not clear, however, as Putnam proffers that it is hard to tell if voting causes civic engagement or the other way around. That said, the very next chapter in *Bowling Alone* discusses civic participation—belonging to social organizations—a measure captured by INCHI from the perspective of social bridging (type of participation in different groups) rather than social bonding (or level of participation within each group). This behavior has declined greatly in America as well as lagged in Indiana.

Social connectedness, a focus of INCHI, is important in terms of social bonding and bridging through both strong and weak ties that form an individual and community network of engagement. In a seminal paper, Granovetter (1973) discussed an individual’s network in terms of their strong ties (i.e., friends and people in their lives with frequent, long-lasting, and/or intense relationships) as well as their weak ties (i.e., connections to other people through the primary strong ties or through other weak ties, which are less frequent and intense relationships). Granovetter applied this knowledge to labor studies to show the strength of weak ties in finding employment and other examples such as the increase in one’s network of strong and weak ties after a change in jobs. Further, weak ties are also important to the mobilization of communities as long as the ties are based on

bridging across groups rather than bonding within groups. Flowing from this framework, INCHI developed measures of strong ties (discussing politics with friends and families, eating dinner with family members, and sharing communication with those in one's immediate social network), with higher levels of this type of activity denoting a stronger social bond of strong ties. INCHI also included weak ties of informal social connectedness (talking with neighbors and reciprocity of favors with neighbors), which denote a form of social bridging that has individual as well as community benefits. As proffered by Putnam, these important weak ties of social bridging have been declining throughout America over time and are found lagging in Indiana, as noted in INCHI.

Volunteerism, the final focus of INCHI, is also covered by Putnam as a component of social capital. He notes that volunteerism has become more individual than communal, suggesting that it plays a more limited role in predicting political involvement. INCHI measures volunteerism in three ways: engagement (whether one volunteers at all or volunteers for a community school group), bridging (the number of organizations volunteered for), and bonding (the number of hours volunteered in the past 12 months). The statistical analysis that follows derives from the integration of Putnam's view on social capital with the measures used by INCHI to assess the civic health of Indiana residents; these measures were not connected in INCHI but are connected here through application of the concepts that compose social capital.

This theoretical framework is buttressed with a brief review of the literature associating these measures with voting outcomes in college student samples. Recent studies have added to our knowledge in this area from the sociological, political science, and educational perspectives, often times with samples of college students. As Mann (1999) informs using data from the Annual Freshman Survey, political interest by college freshman had "long been in decline, but reached a low in 1998" (p. 263) as just 14 percent of freshman reported discussing politics in the past year. Mann further informs that students at historically black colleges are the most interested in keeping up to date on politics, while male freshman are more interested in influencing the political structure and females are more concerned with community action, noting differences in race and gender that are important to control for. Walker (2000) reported that many college students display a disconnect between community service, which they have a positive view of, and politics, which they view negatively and often do not participate in, casting doubt on their connection as established through social capital theory. Walker proposed using service learning to bridge this gap, which relates directly to Putnam's work tying education to civic and political participation, making college students an important group to study on these relationships and supporting the INCHI conclusions. Brown (1999) presents data that support this link as well, as across genders, those with more college report more volunteerism than those with no college, and those with college experience are more likely to vote (Flanagan and Levine, 2010). The direct link between volunteerism and propensity to vote is less clear, and many scholars have made arguments that question the volunteer/civic engagement-voting link (Ball 2005; Galston 2004; Torney-Purta and Amadeo 2003; Wilson and Musick 1999).

International research has found that increased levels of civic engagement, volunteerism, and social connectedness positively affect voter turnout in their respective nations (Bekkers 2005; Ikeda and Richey 2005; Nakhaie 2006), and in the United States, this relationship has been found in adolescent and high school samples (McFarland and Thomas 2006). Though this link is not universal, there are other benefits to people, especially youths, when they volunteer, connect socially, and engage civically through groups (see Flanagan and Levine 2010), so it is important to look at these measures as ends in themselves (by determining the current level of these activities within specific samples) and as means to an end (increased voting, as an example). This study seeks to do both while testing the hypothesis that increased levels of volunteerism, social connectedness, and civic engagement predict an increased likelihood of voting in Indiana University Northwest students who are registered to vote.

Survey, Sample, Methods, and Variables

Survey

The questions for the survey relative to civic engagement, social connectedness, volunteerism, and voting were all taken directly from the Indiana Civic Health Index and verified through their original source, the supplemental files of the Current Population Surveys (U.S. Census Bureau 2010). This process enhanced the validity of the survey instrument and allowed direct comparison with the results of the INCHI study. It also contrasts the approach taken by INCHI, in which secondary statistics from the U.S. Census were compiled on a statewide basis without sampling more specific populations within Indiana.

The survey also included several questions relating to respondent demographics. These questions were included to assess the generalizability of the sample to the population of Indiana University Northwest students as well as to utilize as control variables in the analysis. In all, there were 28 questions: 7 demographic, 18 deriving from INCHI/U.S. Census, and 3 that related directly to student perceptions of the Indiana University Northwest mission. The latter questions are not discussed here.

Sample

The population of the student body at Indiana University Northwest was 5,500 students in the Spring 2012 semester. Based on time and informational constraints,¹ the decision was made to contact the entire student body through campus e-mail (three times at two-week intervals for a total of six weeks) to seek participation from as wide a sample as could be reached. Faculty were asked via e-mail through the Center for Urban and Regional Excellence (CURE) to add a link to the electronic online survey in their online course-management pages as well as to announce the survey in classes. Faculty were e-mailed three times by CURE at two-week intervals over a six-week period. Though this was not a truly random sample, no particular students, faculty, or classes were targeted or asked to participate, and every student on campus had an equal opportunity to complete the survey. This is a limitation that will be discussed more in depth in a later section.

The survey was deployed on January 11, 2012, and was open until February 17, 2012. In that time frame, 374 total students completed the survey, 350 students completed every question, and 300 students reported being registered to vote, forming the sample for the current analysis. Using the standard confidence interval of 95 percent based on the population of 5,500 students, the margin of error for the full sample was ± 4.9 percent, and the margin of error for the final sample used in this analysis was ± 5.5 percent. In terms of generalizability of the sample to the population of students (see Table 1), we oversampled females, but the campus has a wide gender disparity and is 70 percent female. We also slightly oversampled white students, but that came at the expense of students identifying as “other” rather than from the black student population, which was sampled in exact proportion to the black student population. We oversampled graduate students; there may be a bias present that would make graduate students more motivated to respond to such a survey. The county of residence in our sample matches closely to the population for Lake County (where the university is located), but we slightly oversampled students who live in Lake and Porter Counties and slightly undersampled students from other counties. We were unable to directly compare our sample in terms of age and asked respondents two questions that the university typically does not but that were important to control for: whether the respondent owns or rents their residence and whether the respondent is employed full time, is employed part time, or is not employed currently, as this was a student population at a commuter campus that is in many ways nontraditional in terms of student age and background. The final sample, though not a simple random sample, was fairly generalizable to the student population at IU-Northwest with the limitations discussed above.

Methods

A final sample of 300 respondents who reported being registered to vote (86 percent of the sample) was utilized to analyze voting behaviors and the predictors of this behavior. Logistic regression was employed for several reasons. First, the two outcomes being studied (did one vote in the previous state election, and did one vote in the previous national election) were measured dichotomously as yes/no, a feature of the survey that fit the logistic regression model. Additionally, the predictor variables were also categorical, which fit this analytical approach well. Furthermore, logistic regression allowed for control variables (demographics) to be entered into the model as a block to be held constant when analyzing the impact of the other variables that are entered as a block as well (social connectedness, civic engagement, and volunteerism). This produced statistical evidence of the models’ predictive ability and explanation of the variance in voting behavior at each stage of the analysis for greater specificity. Finally, the hypotheses can be tested in terms of the odds ratios and significance level to gauge whether increased social connectedness, volunteerism, and civic engagement predict the likelihood of voting in the last state and/or national election. This is similar to the approach taken by Campbell (2000) in analyzing the relationship between adolescents’ frequency of community service and their political participation while controlling for several of the same variables used in the present study. The optimal ratio of 20 observations per variable was also met in this model (300 observations, 15 variables).

Table 1. Sample Generalizability/Control Variable Frequencies (N = 300)

Variable/Question	Frequencies	Population Parameters	Difference of Sample to Population
Gender	Female = 228 (76%) Male = 72 (24%)	Female = 70% Male = 30%	Female: +6% Male: -6%
Age	18-22 = 86 (28.7%) 23-29 = 75 (25%) 30-39 = 56 (18.7%) 40-49 = 46 (15.3%) 50+ = 37 (12.3%)	Not directly comparable to population	N/A
Race/Ethnicity	White = 182 (60.7%) Black = 69 (23%) Other = 49 (16.3%)	White = 56% Black = 23% Other = 21%	White: +4.7% Black: 0 Other: -4.7%
Grade Level	UG = 227 (75.7%) G = 73 (24.3%)	UG = 88% G = 12%	UG: -12.3% G: +12.3%
Own/Rent Residence	Own = 152 (50.7%) Rent = 148 (49.3%)	N/A	N/A
County of Residence	Lake = 215 (71.7%) Porter = 60 (20%) Other = 25 (8.3%)	Lake = 68% Porter = 17% Other = 15%	Lake: +3.7% Porter: +3% Other: -6.7%
Employment Status	Full Time = 100 (33.3%) Part Time = 115 (38.3%) Not Employed = 85 (28.3%)	N/A	N/A

Notes: G = Graduate; UG = Undergraduate

Variables

In addition to the control variables (demographics) discussed above, Table 2 displays the study variables, their response frequency, and, where available, the comparative data from INCHI (2011).

Table 2. Frequency Table of Question Responses in Final Sample of Students Registered to Vote (N = 300)

Variable/Question	Frequencies in Sample	INCHI
Voting Behavior		
Registered to Vote?	Yes = 300 (86%) No = 50 (14%)	INCHI reports 61.2% voter registration, while calculations from the Division of Elections puts it at 88% of voting age population as active
Vote in the most recent national election (2008)?	Yes = 229 (76%) No = 71 (24%)	Not reported numerically
Vote in the most recent state election (2010)?	Yes = 176 (59%) No = 124 (41%)	39.4% turnout
Civic Engagement		
Last 12 months: number of 4 groups respondent belonged to	0 of 4 groups = 88 (29.3%) 1 of 4 groups = 90 (30%) 2 of 4 groups = 52 (17.3%) 3 of 4 groups = 44 (14.7%) 4 of 4 groups = 26 (8.7%)	36.2% of Hoosiers belong to civic groups compared to 70.7% of IU-Northwest sample that belong to at least one; 35.4 belong to school groups; 33.9% to civic/social organizations; 38% to sports or recreation; 35.5% to religious groups
Social Connectedness		
In typical month, how often are politics discussed with friends or family?	Basically every day = 61 (20.3%) Few times a week = 94 (31.3%) Few times a month = 81 (27%) Once a month = 50 (16.7%) Not at all = 14 (4.7%)	21.6% report discussing politics with friends or family at least a few times a week, compared to 51.6% of IU-Northwest sample. 45% of Hoosiers do not discuss politics at all, compared to 4.7% of sample

(Continued on next page.)

Table 2. Frequency Table of Question Responses in Final Sample of Students Registered to Vote (N = 300), cont.

Variable/Question	Frequencies in Sample	INCHI
Social Connectedness, cont.		
How often eat dinner with members of household?	Basically every day = 136 (45.3%)	90.1% of Hoosiers report eating dinner with family at least a few times a week, compared to 77.3 in the IU-Northwest sample
	Few times a week = 96 (32%)	
	Few times a month = 35 (11.7%)	
	Once a month = 14 (4.7%)	
	Not at all = 19 (6.3%)	
In typical month, how often communicate with friends and family through e-mail or internet?	Basically every day = 163 (54.3%)	Not reported
	Few times a week = 83 (27.7%)	
	Few times a month = 32 (10.7%)	
	Once a month = 8 (2.7%)	
	Not at all = 14 (4.7%)	
How often talk with neighbors?	Basically every day = 19 (6.3%)	Not reported
	Few times a week = 83 (27.7%)	
	Few times a month = 96 (32%)	
	Once a month = 36 (12%)	
	Not at all = 66 (22%)	
How often do you and neighbors do favors for one another?	Basically every day = 9 (3%)	Not Reported
	Few times a week = 26 (8.7%)	
	Few times a month = 69 (23%)	
	Once a month = 77 (25.7%)	
	Not at all = 119 (39.7%)	

(Continued on next page.)

Table 2. Frequency Table of Question Responses in Final Sample of Students Registered to Vote (N = 300), cont.

Variable/Question	Frequencies in Sample	INCHI
Volunteerism		
Last 12 months: respondents who have volunteered services or labor to an organization without being paid and/or to any school-related activities in the community	No volunteerism = 95 (31.7%) 1 of 2 types = 125 (41.7%) 2 of 2 types = 80 (26.7%)	26.1% of Hoosiers report volunteering in 2010, compared to 68.3% in the IU-Northwest sample 29.7% of Indiana college students volunteer, compared to 68.3% at IU-Northwest
Last 12 months: number of organizations volunteered for?	0 = 94 (31.3%) 1-2 = 145 (48.3%) 3-4 = 45 (15%) 5 or more = 16 (5.3%)	Not reported
Last 12 months: estimated number of total hours volunteered?	None = 101 (28.9%) 1-10 = 91 (26%) 11-20 = 56 (16%) 21-30 = 31 (8.9%) 31-40 = 16 (4.6%) 41 or more = 55 (15.7%)	Not reported

The two voting behaviors that form the dependent outcome measure in each model were (1) did you vote in the most recent state election and (2) did you vote in the most recent national election? Responses were coded as 0 = No, 1 = Yes.

The predictor variables are broken into several categories reflecting INCHI and the theoretical framework employed to structure the data. Social connectedness has five associated measures: the frequency with which (1) the respondent discusses politics with family and friends; (2) the respondent has dinner with family and friends; (3) the respondent communicates with family and friends through phone or e-mail; (4) the respondent talks with neighbors; and (5) respondent and their neighbors do favors for one another. The first three measures relate to strong ties, while the latter two relate to weaker social ties, and the focus on frequency of connectedness denotes interest in social bonding rather than bridging. All five measures are coded as 1 = every day, 2 = at least a few times a week, 3 = at least a few times a month, 4 = once a month, and 5 = not at all.

On the survey, civic-engagement level was asked as four separate questions of belonging to specific types of social groups: school, neighborhood, or community associations; civic or service organizations; sports or recreation associations; and religious organizations beyond the attendance of services. These individually measure social bridges, so the variables were combined to create a single measure of civic-

engagement level rather than viewing this engagement in isolation, with 0 = belonging to none of these groups, 1 = belonging to 1 of 4 groups, 2 = belonging to 2 of 4 groups, 3 = belonging to 3 of 4 groups, and 4 = belonging to 4 of 4 groups. As a respondent moves from 0 to 4, the level of bridging and ties increase, as does civic engagement.

There were three measures of volunteerism: two that measure social bridging and one that measures social bonding. Similar to the civic-engagement measure, two survey questions were combined into a single measure of volunteerism in the past year: (1) did you volunteer for any organizations or contribute any labor for which you were not compensated and (2) did you volunteer for any school-related activities? This was recoded into three categories: 0 = responses of no to both questions, 1 = a response of yes to 1 of the 2 questions, and 2 = a response of yes to both questions. As one goes from 0 to 2, the level of bridging increases. The next measure of volunteerism is also a bridging question in that it asks how many organizations the respondent volunteered for in the past 12 months, coded as 1 = none, 2 = 1–2 organizations, 3 = 3–4 organizations, and 4 = 5 or more organizations. The final measure of volunteerism proxied a respondent's bonding in the form of asking how many hours in the past year the respondent volunteered, with responses coded as 1 = no hours, 2 = 1–10 hours, 3 = 11–20 hours, 4 = 21–30 hours, 5 = 31–40 hours, and 6 = 41 or more hours.

Results

Table 2 shows the frequency of responses for each measure and its respective categories and, where available, compares those with the INCHI findings. In all, the Indiana University Northwest sample exceeds INCHI on several measures (voting registration, turnout in 2008 and 2010, respondents belonging to at least a civic group, discussing politics at least a few times a week, and volunteerism). The students in this sample were less likely than the average Hoosier to eat dinner with members of their households at least a few times a week (90.1 percent, compared to 77.3 percent). This information is positive for the Indiana University Northwest campus community but needs to be analyzed for greater specificity in terms of the relationships of these measures. The logistic regression model results are presented and discussed below.

State Election Model

For the 2010 midterm election, 176 of the 300 registered voters in the Indiana University Northwest student sample (58.7 percent; 95 percent CI of 53.2–64.2 percent) reported voting, a turnout that exceeds the 41 percent statewide turnout in Indiana. The first block, which contained all the control variables, was significant ($\chi^2 = 40.631$, 11 df, $p < .01$), had a good fit with the data (Hosmer & Lemeshow $p = .941$), and explained between 12.7 percent (Cox & Snell R^2) and 17.1 percent (Nagelkerke R^2) of the variance in 2010 midterm election voting behavior. These variables, as a block, increased the predictive ability of the model by 5.3 percent to 64 percent overall (72.2 percent correct for who voted and 52.4 percent for who did not vote).

When social connectedness, civic engagement, and volunteerism measures are included in the model (Table 3), the block of variables is significant ($\chi^2 = 51.16$, 34 df, $p < .05$), as is the overall model ($\chi^2 = 91.789$, 45 df, $p < .01$, $-2LL = 315.04$). The final block also had goodness of fit to acceptable standards (Hosmer & Lemeshow $p = .475$) and explained an additional 13.7 percent to 18.4 percent of the variance in voting behavior. In sum, both blocks of variables accounted for between 26.4 percent (Cox & Snell R^2) and 35.5 percent of the variance in voting behavior. The final block of predictors increased the predictive ability of the model by 6 percent, to 70 percent overall (78.4 percent of who voted and 67.7 percent of who did not vote).

Despite these overall model figures, there were only a few significant predictor variables. Age was a significant factor. When referenced against the 18–22-year-old age group, those 40–49 were 3.04 times more likely to vote ($\beta = 1.111$, OR = 3.038, $p = .03$), while those 50 and older were 3.46 times more likely to vote in the 2010 election ($\beta = 1.241$, OR = 3.46, $p = .046$). Those 23–29 and 30–39 were not significantly more likely to vote than those 18–22 in the sample.

Race also played a factor, as black students were 2.43 times more likely to vote than white students ($\beta = .887$, OR = 2.42, $p = .04$), while students identifying as “other” race/ethnicity were not significantly more likely to vote than white students on campus.

While controlling for demographics, each of the social connectedness variables were referenced against the group that reported “every day” activity, denoting more social connectedness on every measure. The only significant measure was the frequency of discussing politics with friends and family, as every single response category was significantly less likely to vote than the reference group: a few times a week (OR = .379, $p = .03$), a few times a month (OR = .230, $p = .002$), once a month (OR = .309, $p = .02$), and not at all (OR = .162, $p = .022$). No other measures or categorical responses within these measures of social connectedness were significant in predicting voting behavior in this sample.

Belonging to none of the four types of civic groups/associations was the reference group for analyzing the impact of civic-engagement level on voting behavior. Although belonging to 2 or 3 groups increased the odds of voting in this election, these ratios were not significant; however, reporting belonging to all 4 types of groups/associations was a significant predictor, with these respondents 6.78 times more likely to report voting in the midterm, holding other factors constant ($\beta = 1.914$, OR = 6.783, $p = .021$). Despite increased and decreased odds of predicting voting behavior within all three measures of volunteerism, none of the measures or categories within the measures was significant in this model.

Table 3. State Election Logistic Regression Model Results

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Gender (Female)	-.449	.370	1.476	.224	.638	.309	1.317
Age**			13.421	.009			
23–29	.244	.423	.333	.564	1.276	.557	2.923
30–39	-.498	.478	1.085	.298	.608	.238	1.551
40–49*	1.111	.519	4.587	.032	3.038*	1.099	8.400
50 or older*	1.241	.621	3.994	.046	3.460*	1.024	11.692
Race/Ethnicity		4.212	.122				
Black*	.887	.436	4.141	.042	2.428*	1.033	5.707
Other	.306	.405	.569	.451	1.358	.613	3.005
Grade Level (Graduate)	.067	.399	.028	.867	1.069	.489	2.337
Ownership (Rent)	-.135	.334	.164	.685	.874	.454	1.680
Employment			.149	.928			
Part-time	-.124	.395	.098	.754	.884	.407	1.916
Not currently employed	-.145	.413	.124	.725	.865	.385	1.942
Social Connectedness							
Discuss Politics Frequency*			11.427	.022*			
Few times a week*	-.970	.453	4.592	.032	.379*	.156	.920
Few times a month**	-1.472	.468	9.907	.002	.230**	.092	.574
Once a month*	-1.175	.510	5.317	.021	.309*	.114	.838
Not at all*	-1.819	.792	5.279	.022	.162*	.034	.765
Dinner Frequency			3.369	.498			
Few times a week	-.599	.364	2.700	.100	.550	.269	1.122
Few times a month	-.140	.488	.083	.774	.869	.334	2.260
Once a month	-.767	.726	1.116	.291	.464	.112	1.927
Not at all	-.481	.649	.549	.459	.618	.173	2.206

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Table 3. State Election Logistic Regression Model Results, cont.

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Social							
Connectedness, cont.							
Communication							
Frequency			3.314	.507			
Few times a week	.101	.340	.088	.767	1.106	.568	2.153
Few times a month	-.023	.511	.002	.965	.978	.359	2.661
Once a month	2.093	1.198	3.052	.081	8.110	.775	84.907
Not at all	.406	.696	.340	.560	1.501	.384	5.872
Talk with							
Neighbors			1.217	.875			
Few times a week	.179	.801	.050	.823	1.196	.249	5.749
Few times a month	-.126	.825	.023	.879	.882	.175	4.441
Once a month	.292	.919	.101	.751	1.339	.221	8.113
Not at all	.324	.936	.120	.729	1.383	.221	8.661
Favors for							
Neighbors							
Few times a week	-.361	1.385	.068	.795	.697	.046	10.536
Few times a month	-1.200	1.301	.851	.356	.301	.024	3.855
Once a month	-1.362	1.316	1.070	.301	.256	.019	3.381
Not at all	-1.736	1.346	1.664	.197	.176	.013	2.464
Civic Engagement							
Level of Civic Engagement							
Belong to 1 of 4 civic groups	-.066	.395	.028	.868	.936	.432	2.031
Belong to 2 of 4 civic groups	.259	.513	.254	.614	1.295	.473	3.543
Belong to 3 of 4 civic groups	.781	.571	1.871	.171	2.184	.713	6.690
Belong to 4 of 4 civic groups*	1.914	.831	5.311	.021	6.783*	1.331	34.551

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Table 3. State Election Logistic Regression Model Results, cont.

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Volunteerism							
Level of Volunteerism (12 months)			.201	.904			
Volunteer in Organization or School	.157	.742	.045	.833	1.170	.273	5.006
Volunteer in Organization and School	-.010	.835	.000	.991	.990	.193	5.086
Number of Organizations Volunteered for			1.683	.641			
1-2	-.304	.896	.115	.734	.738	.127	4.275
3-4	.071	1.005	.005	.944	1.074	.150	7.695
5 or more	-1.018	1.221	.695	.404	.361	.033	3.958
Number of Hours Volunteered			3.578	.612			
1-10	.730	.817	.798	.372	2.075	.418	10.298
11-20	.681	.888	.588	.443	1.976	.347	11.258
21-30	.328	.976	.113	.737	1.388	.205	9.407
31-40	.590	1.093	.291	.590	1.803	.212	15.370
41 or more	1.331	.915	2.117	.146	3.785	.630	22.731
Constant	2.141	1.530	1.957	.162	8.504		

Notes: Reference Group was first indicator in each group, in order of listing:
CONTROLS: male; 18-22; white; undergraduate; own home, employed full time;
SOCIAL CONNECTEDNESS: every day for each response category
CIVIC ENGAGEMENT: belonging to none of the types of groups
VOLUNTEERISM: belonging to neither of the two group types; volunteering with no
organizations in the past 12 months; volunteering no hours in the past 12 months
*significant at $p < .05$; **significant at $p < .01$

National Election Model

In the sample of Indiana University Northwest students, 229 of 300 (76.3 percent) report voting in the 2008 national election (see Table 4 for regression results). The first block of control variables (with age excluded as a predictor because the 18-22-year-old age group was not old enough to have voted in this election) was significant ($\chi^2 = 37.293$, 7 df, $p < .01$, $-2LL = 291.031$), had good data fit (Hosmer & Lemeshow = .898), and explained between 11.7 percent (Cox & Snell R^2) and 17.6 percent (Nagelkerke R^2) of the variance in voting behavior, similar to the 2010 election model. This block added just

0.4 percent to the predictive ability of the model (76.7 percent predicted correctly) and was able to correctly predict 96.5 percent of students who voted but just 12.7 percent of students who did not.

Table 4. National Election Logistic Regression Model Results

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for	
						EXP(B)	
						Lower	Upper
Gender (Female)	.736	.427	2.962	.085	2.087	.903	4.823
Race/Ethnicity			5.050	.080			
Black	1.009	.561	3.234	.072	2.744	.913	8.244
Other	-.423	.465	.826	.363	.655	.263	1.631
Grade Level							
(Graduate)	.962	.559	2.962	.085	2.618	.875	7.832
Ownership (Rent)	-.677	.366	3.419	.064	.508	.248	1.041
Employment			5.175	.075			
Part-time	-.862	.446	3.738	.053	.422	.176	1.012
Not currently employed	.060	.528	.013	.910	1.061	.377	2.989
Social							
 Connectedness							
Discuss Politics			12.10				
Frequency*			2	.017			
Few times a week*	-1.608	.663	5.888	.015	.200*	.055	.734
Few times a month**	-2.065	.672	9.445	.002	.127**	.034	.473
Once a month*	-1.459	.712	4.196	.041	.232*	.058	.939
Not at all**	-2.675	.916	8.523	.004	.069**	.011	.415
Dinner Frequency			8.191	.085			
Few times a week	-.506	.425	1.417	.234	.603	.262	1.387
Few times a month	.675	.549	1.515	.218	1.965	.670	5.761
Once a month	.977	.946	1.067	.302	2.656	.416	16.949
Not at all	-1.269	.761	2.783	.095	.281	.063	1.248
Communication							
Frequency			4.103	.392			
Few times a week	-.258	.408	.399	.528	.773	.348	1.719
Few times a month	.005	.576	.000	.993	1.005	.325	3.108
Once a month	20.431	13260.033	.000	.999	7.469E8	.000	.
Not at all	2.208	1.202	3.375	.066	9.095	.863	95.861

(Continued on next page.)

Table 4. National Election Logistic Regression Model Results, cont.

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Social							
Connectedness, cont.							
Talk with Neighbors			1.154	.886			
Few times a week	.368	1.034	.126	.722	1.444	.190	10.967
Few times a month	.152	1.030	.022	.882	1.165	.155	8.776
Once a month	-.108	1.149	.009	.925	.898	.094	8.544
Not at all	-.332	1.135	.085	.770	.718	.078	6.639
Favors for Neighbors			.608	.962			
Few times a week	-20.621	11470.103	.000	.999	.000	.000	.
Few times a month	-20.063	11470.103	.000	.999	.000	.000	.
Once a month	-20.218	11470.103	.000	.999	.000	.000	.
Not at all	-20.203	11470.103	.000	.999	.000	.000	.
Civic Engagement							
Level of Civic Engagement			1.401	.844			
Belong to 1 of 4 civic groups	.351	.455	.596	.440	1.420	.583	3.462
Belong to 2 of 4 civic groups	.131	.600	.048	.827	1.140	.352	3.692
Belong to 3 of 4 civic groups	.358	.669	.286	.593	1.430	.385	5.311
Belong to 4 of 4 civic groups	1.004	1.024	.962	.327	2.729	.367	20.292
Volunteerism							
Level of Volunteerism (12 months)			.541	.763			
Volunteer in Organization or School	-.193	.780	.061	.804	.824	.179	3.799
Volunteer in Organization and School	-.528	.901	.343	.558	.590	.101	3.450

(Continued on next page.)

Table 4. National Election Logistic Regression Model Results, cont.

	B	S.E.	Wald	Sig.	Exp(B)	95% C.I. for EXP(B)	
						Lower	Upper
Volunteerism, cont.							
Number of Organizations Volunteered for			4.151	.246			
1–2	.530	1.016	.272	.602	1.698	.232	12.445
3–4	1.483	1.203	1.519	.218	4.406	.417	46.570
5 or more	–.401	1.424	.079	.778	.670	.041	10.925
Number of Hours Volunteered			2.658	.752			
1–10	.137	.961	.020	.886	1.147	.174	7.550
11–20	–.045	1.087	.002	.967	.956	.114	8.049
21–30	–.584	1.149	.259	.611	.558	.059	5.300
31–40	.889	1.535	.336	.562	2.434	.120	49.263
41 or more	.492	1.121	.193	.661	1.636	.182	14.707
Constant	22.372	11470.103	.000	.998	5.198E9		

Notes Reference Group was first indicator in each group, in order of listing:
 CONTROLS: male; white; undergraduate; own home, employed full time;
 SOCIAL CONNECTEDNESS: every day for each response category
 CIVIC ENGAGEMENT: belonging to none of the types of groups
 VOLUNTEERISM: belonging to neither of the two group types; volunteering with no
 organizations in the past 12 months; volunteering no hours in the past 12 months
 *significant at p< .05; **significant at p<. 01

When social connectedness, civic engagement, and volunteerism were added in the second block, the block was significant ($\chi^2 = 49.484$, 34 df, $p < .05$), as was the overall model ($\chi^2 = 86.777$, 41 df, $p < .01$). This block also had acceptable goodness-of-fit (Hosmer & Lemeshow $p = .833$) and explained an additional 13.4 percent to 20.2 percent of the variance in voting likelihood, as the overall model explained between 25.1 percent and 37.8 percent of the variance. These R^2 values, as well as their change between the blocks in the model, were very similar between the 2010 and 2008 election models. The variables in this block added just 1.3 percent of predictive ability to the model (79 percent), and the final model was able to predict 92.1 percent of those who voted and 36.6 percent of those who did not vote.

Perhaps the most interesting finding in this model is that only one significant measure predicts voting behavior: the frequency with which the respondent discusses politics with family and friends. Compared with those who report discussing politics every day, those who discuss politics a few times a week (OR = .20), a few times a month (OR = .13), once a month (OR = .232), or not at all (OR = .069) are all significantly less likely to have voted in the 2008 election. Despite some increases or decreases in odds

ratios on certain measures and their respective categories within measures, no other predictors were significant in predicting the odds of the groups being more or less likely than the reference group to have voted in this election.

Discussion and Social Implications

The results of this study are important for three specific reasons. First, the Indiana University Northwest sample of registered voters, in comparison to statewide figures, shows a higher level of voting turnout in the last national (76 percent versus 61 percent) and state elections (59 percent versus 39.4 percent), civic group participation (70.7 percent of students belong to 1 of 4 types of civic organizations; range 33.9 percent to 38 percent in each individual type); discussion of politics at least a few times a week with family/friends (51.6 percent versus 21.6 percent), and volunteerism (68.3 percent versus 26.1 percent). Though they communicate often with family/friends, the students do not eat dinner as often with members of their households at least a few times a week as the average Hoosier (77.3 percent versus 90.1 percent). Furthermore, while the students report a strong bond with those close to them, the weaker bonds measured here, namely interactions with neighbors, were very weak.

The prediction of voting likelihood is important to discuss. Putnam has specifically noted voter turnout returning the 1960s levels as a measure of increasing social capital in the modern generation to the levels of their grandparents, a challenge he concludes his book with. In this sample, 76 percent of registered voters turned out in 2008, reaching general Indiana levels comparable to those in the 1960s (see Figure 2). In addition, voting turnout in the midterm election (59 percent) is similar to statewide turnout in the 1970s and is higher than any statewide average since 1986. That said, very few measures significantly predicted voting behavior. The only clear measure that significantly played a role in both models is the discussion of politics daily, as those who participate in daily political discussions are significantly more likely to have voted than those who discuss politics a few times a week, a few times a month, monthly, or not at all. In the state election model, belonging to 4 of the 4 groups surveyed led to a much higher and significant odds ratio of voting, but in neither model was any measure of volunteerism significant, consistent with previous research using college samples. As INCHI (2011) noted, starting the political discussion among students is a very important avenue through which they are more likely to vote.

The main question based on these findings becomes: why weren't civic engagement, volunteerism, and social connectedness more predictive of voting behavior as hypothesized? There are several potential reasons that require future research to provide answers. Campuses across the nation are focused on increasing civic engagement as an end in itself, but the results here reflect the lack of social bridging and weak ties so essential to the individual, community, and society as well as strong bonding with strong ties as found by Putnam (2000) over time. Based on these results, campuses may need to be more comprehensive in their approach to and definition of civic engagement. This would include a focus on civic responsibility (voting), the building of weak ties within the campus community as well as between students and community members that

transcends the service of volunteerism, which does not build ties, and lessening the focus on how many campus organizations exist in exchange for encouraging interaction between the groups to produce civic outcomes. That said, at a minimum, campuses should seek to increase the discourse of politics on campus through multiple methods, as this is the strongest predictor of voting behavior in the student population surveyed. This suggests that campus communities and their student networks should continue as an important unit of analysis in future studies on this topic.

The results found here replicate more recent studies but do not support the social capital framework of Putnam (2000). This points to wider American societal trends, even among the college educated, in which bridging and bonding deficits or surpluses are eliciting outcomes not predictive of civic participation activities such as voting. The lack of engagement level (with the exception of belonging to 4 of 4 civic groups in the state election) and weak ties to neighbors point to a more isolated social structure that Putnam warned of, but even the strong bonding (connection to family and volunteer organizations) and bridging (the number of volunteer organizations worked with) fail to predict voting behavior. This could be due to the fact that social connectedness, volunteerism, and civic engagement are constant, evolving, ongoing processes within an individual and community whereas voting occurs at most once every two years and more likely once every four years. Thus, future research needs to focus on more developed outcomes beyond voting to gauge the impact of these measures on civic and political participation. In addition, more measures of social connection, and those connections' depth and frequency, need to be included as well to fully explain what predicts voting behavior in college students. INCHI (2011) serves as an important starting point, and future studies need to continue to build on the present results to truly affect voter turnout and behavior in Indiana and throughout the nation.

Limitations

There are several limitations that need to be addressed in the present study. The first is the sample, which was not a true random sample because of time and informational constraints. Though every student had an opportunity to participate, there may be some selection bias in that students who did not check their college e-mail or did not have an instructor post the survey may not have been as aware of it as those who completed the survey. Though the sample was fairly generalizable to the Indiana University Northwest population, it is not generalizable to other university populations or other populations within the Indiana University Northwest community. There is also a potential for the respondent to be biased in terms of memory or expectation, even though the survey was online and anonymous. Several questions ask for the last 12 months of activity, and some questions, such as those about voting or registration, may bias the respondent to answer "yes," as this is the expected behavior of a citizen.

These limitations relate directly to the original purpose of the survey, and that was to have graduate students conduct meaningful research within their community. The short time frame of a single semester limited some sampling options, as the goal was also to teach about the process as it was being conducted. Though the measures used were valid,

the survey was limited to these previously asked questions, so if other measures were introduced, the results could change. Future surveys should incorporate other measures of civic activity, strong and weak ties.

Conclusion

This study, though limited in its sampling of students on one IU campus, presents some interesting findings. Students are politically engaged in terms of voting, report belonging to civic associations/groups, and volunteer more than the average Hoosier; however, while their strong ties are strong, their weak ties are weak, as measured here. In addition, there is a great untapped volunteer capacity relative to the specific environment of Indiana University Northwest. Finally, the greatest and most significant predictor of voting across both models is discussing politics with friends/family on a daily basis. The university, through its focus on civic engagement, can affect all three of these areas, increasing social capital (especially weak ties), filling untapped yet sorely needed volunteer capacity, and increasing student interest in discussing politics through faculty, coursework, and continued partnerships like the one that produced INCHI and the present study. Though the data provided here are mainly positive, there is much more for the campus community to do in the future to increase social capital both on campus and in the community it serves.

ENDNOTE

1. This work was part of a graduate statistics class service learning through applied research project within a semester, limiting sampling options to maximize learning opportunities.

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