

Cheap, But Still Not Effective: An Experiment Showing that Indiana’s Online Registration System Fails to Make Email an Effective Way to Register New Voters

Elizabeth A. Bennion (ebennion@iusb.edu) ■ Indiana University South Bend
David W. Nickerson (dnickers@nd.edu) ■ University of Notre Dame

ABSTRACT

We conducted a randomized voter registration field experiment including 7,366 trackable students at a public Indiana university.¹ Consistent with prior research, we found no effect from emails linking students to traditional downloadable forms. Contrary to our hypothesis, Indiana’s new online voter registration system did not boost the effectiveness of email outreach in generating new registrations.

INTRODUCTION

Voter registration is a prerequisite for most electoral participation in the 40 states where voters are required to register before Election Day in order to be eligible to cast a vote.² Among eligible citizens, only 60 percent vote in Presidential elections (40 percent in midterm elections). Among people registered to vote turnout is roughly 90 percent vote in presidential elections (75 percent in midterm elections).³ Over 60% of the eligible citizens who do not vote are also unregistered. Many of these unregistered persons would not vote if given the opportunity, but the bureaucratic burden prevents a subset from voting (Verba, Schlozman, and Brady, 2004), perhaps as much as eight percent of the population (Hanmer, 2009). Thus, processes that can make registration easier should have the normatively desirable outcome of increasing participation rates. This manuscript reports the results of an experiment testing the effectiveness of linking people to online voter registration sites at increasing rates of registration.

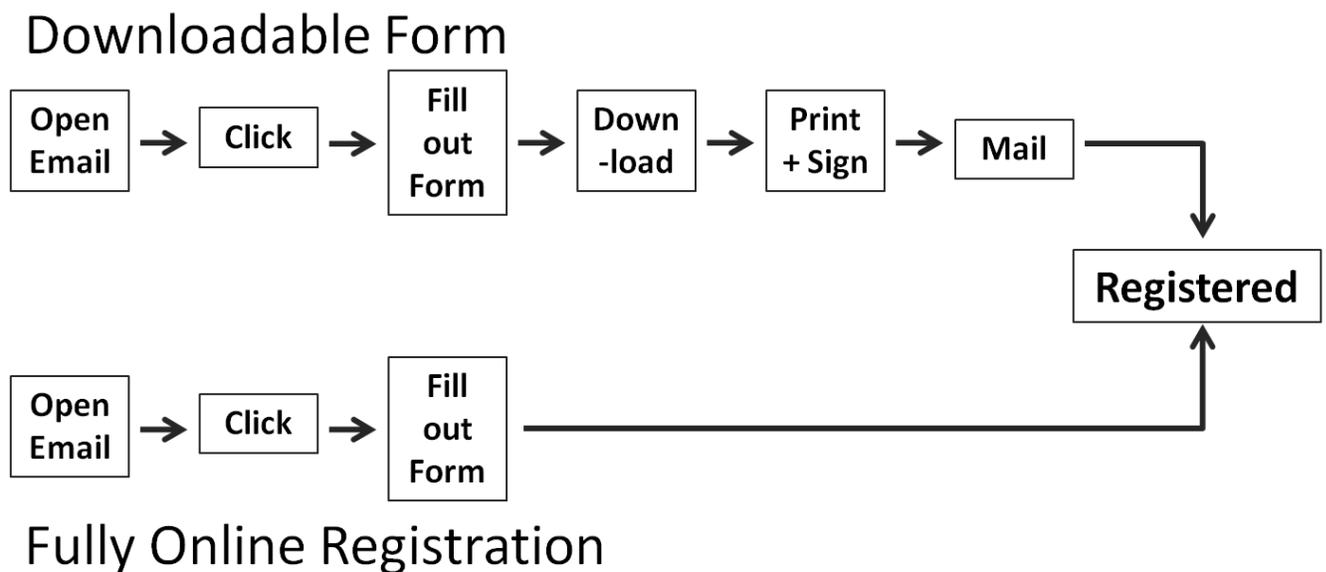
The Internet has made a wide range of activities easier for voters. Information on candidates, ballot propositions, election dates, and polling places are readily available online. The Internet also facilitates participation by reducing the logistical hassles of donating to and volunteering with campaigns. Can the Internet be used to increase rates of voter registration? Extant research offers mixed conclusions. The positive correlation between political engagement online and offline behavior (Tolbert and Mcneal, 2003) led some scholars to believe that once the “digital divide” narrowed, the Internet would bring new people into politics (Krueger 2002). However, more recent research suggests that the Internet simply reinforces existing patterns of participation (Smith et al. 2009) where people with a high propensity to participate simply replace offline activities with online activities (Quintelier and Vissers, 2008; Bochsler, 2009). Specifically with regards to voter registration, two large field experiments found that emailing eligible citizens links to on-line voter registration tools, actually decreased rates of voter registration (Nickerson, 2007a, b; Bennion, 2008; Bennion and Nickerson, 2010). Thus, despite enormous gains in efficiency from online transactions (Barreto et al., 2010), the online tools are an unpromising means of increasing participation.

However, technologies improve and organizations become adept at taking advantage of new tools. Recently eight states, including Indiana, have passed laws allowing the voter registration process to take place entirely online, obviating the need for downloading, printing,

and mailing registration forms. In announcing the new online voter registration system on June 29, 2010, Indiana Secretary of State Todd Rokita stressed the importance of using “tools and technologies Hoosiers use everyday” to make the voting process “simpler and more convenient” and to help local election administrators to “better serve voters” while cutting costs and “enhancing accessibility, accuracy and security” (Rokita, 2010).

Perhaps the online registration system will also increase registration rates and make online outreach to potential voters effective where prior technologies failed (see Figure 1). This experiment explicitly tests this hypothesis by targeting nearly over 7,000 subjects at an Indiana university where fully online voter registration (OLVR) is an option and randomly assigning them to: (a) receive an email linking to the online registration system; (b) receive an email linking to the more common “downloadable form”; or (c) receive no contact from the researcher (control group). After the registration deadline closed, subjects in all three treatment conditions were matched against a state voter file. Random assignment assures any systematic differences in rates of voter registration among the subjects are attributable to the email.

FIGURE 1. COMPARISON OF VOTER REGISTRATION PROCESS FOR DOWNLOADABLE FORMS AND ONLINE REGISTRATION



Consistent with prior research (Bennion and Nickerson, 2010), we find no effect from emails linking to traditional downloadable forms. More discouraging is the fact that Indiana’s new online registration system did not increase the effectiveness of email outreach at registering new voters. Based on earlier research on the effectiveness of classroom-based registration in producing new registrants and voters (Bennion, 2008/2009; Bennion and Nickerson, 2013), we conclude that colleges and universities seeking to register their students should pursue face-to-face strategies (e.g. classroom-based registration) rather than technology-mediated approaches (e.g. email).

DESIGN

To gain reliable insight on the causal effect of adopting a fully online voter registration system, the ideal study would assign OLVR to randomly selected states and compare changes in

subsequent rates of voter registration among key populations. For obvious logistical and ethical reasons, this type of experiment can only be performed as a thought exercise and not implemented. The next best form of data would be an experiment where randomly selected eligible citizens within a state were allowed to register online and the remainder of the populace was forced to rely on traditional forms of registration. Again, ethical and practical challenges make this experiment impossible to conduct. However, an experiment randomly varying a person's *awareness* of online registration as an option and *ease* of access can be conducted. If subjects with increased awareness and access to online tools are more likely to participate, the experiment would provide solid evidence that OLVR can actually increase rates of voter registration.

This experiment used email communication as a means of increasing awareness and access to OLVR. Subjects were randomly assigned to one of three treatment conditions. First, subjects could be sent email encouraging registration and providing a link to the Secretary of State OLVR site. Subjects were sent two emails encouraging participation in the weeks leading up to the registration deadline. The text of the OLVR emails is included in Appendix A. Second, subjects could be sent email encouraging registration and providing a link to the downloadable form from the Secretary of State website. The sender, text and schedule for sending the download email was identical to the OLVR email.⁴ The only difference between the two treatments was the link provided in the email. Thus, a subject's propensity to open the email and click on the link should be identical across the two treatments. The only difference between the two treatments is whether the subject was connected to the fully online registration system or the downloadable form. The third treatment condition was being sent no email related to the experiment. The inclusion of this (control group) condition allows the experiment to estimate the baseline propensity to register to vote and determine whether either of the other two treatments successfully motivated subjects to register.

For the purposes of studying online voter registration, email is the perfect medium to apply the treatment. Email may be less effective than phone calls (Nickerson, 2005) or door knocks (Green, Gerber, and Nickerson, 2003) at increasing voter turnout (Nickerson, 2007a), but it is the most convenient way of getting subjects to a website. Using either a phone call or a door knock, the subject would have to receive the treatment, walk to a computer, and type in the URL to get to the website. This temporal distance makes compliance with the treatment much less likely. In contrast, subjects opening the email can simply click on the link provided and be instantly sent to the website. So while email is often thought of as a weak treatment, it is one of the strongest possible treatments for establishing the effectiveness of OLVR.

Rigorous randomized experiments require a well-defined subject population where the treatments can be randomly assigned and administered correctly and the outcome can be measured for all subjects regardless of treatment assignment. Voter mobilization experiments use lists of registered voters to create this subject population (e.g., Gerber and Green, 2000), but voter registration is a challenge to study because a definitive list of unregistered persons does not exist. This experiment creates this well-defined list of subjects to be targeted for registration by using a university's student directory. Student enrollment files have both logistical and substantive advantages.

Logistically, student directories are excellent for the purposes of studying registration because it has nearly all the data needed to conduct the study. Directory information usually includes full name including middle initial, date of birth, and often a local and a permanent mailing address. This information creates a unique profile and allows for accurate matching against voter files to collect the dependent variable (i.e., registration status). The fact that

students enrolled in classes roughly a month prior to the voter registration deadline also means that the information is extremely accurate. Furthermore, every enrolled student has an email address, so student directories facilitate the delivery of the treatment. Thus, student directories provide an excellent source of subjects for voter registration experiments.

Students are also an interesting population to study with regards to voter mobilization. College students are generally young and less likely than older citizens to have developed a habit of voting (Plutzer, 2002; Bendor, Diermeier, and Ting, 2003; Green, Green, and Shachar, 2003; Fowler, 2006). Gains in participation at a young age usually translate into greater participation in the future. College students also need to register with greater frequency than most citizens. College students are geographically mobile and are extremely likely to have moved in the recent past, necessitating re-registration (Squire, Wolfinger, and Glass, 1987). College students also fall into many of the demographic categories associated with low levels of electoral participation: young (Wolfinger and Rosenstone, 1980), disinterested in politics (Verba, Scholzman, and Brady, 1995), and unlikely to watch or read much political news (Wattenberg, 2007). Pragmatically, the federal government has mandated that colleges and universities make an effort to register students.⁵ To make this policy effective, government officials and universities must distinguish between useless gestures and effective methods for registering student voters. Thus, student directories provide not only a logistically convenient population, but also an interesting one.

College students are also an interesting population to study with regard to e-mail and online registration tactics because they are more reliant on and frequent users of e-mail and the Internet relative to other age cohorts (Tedesco, 2006). Many U.S. colleges and universities have also made email the university's "official" mode of communication with students. For example, Indiana University's policy states: "Email shall be considered an appropriate mechanism for official communication by Indiana University with IU students unless otherwise prohibited by law. The University reserves the right to send official communications to students by email with the full expectation that students will receive email and read these emails in a timely fashion." E-mail has not been found to be effective at boosting voter turnout (Nickerson, 2007a), but college students should be the population most responsive to e-mail and Internet appeals.

Moreover, despite the media depiction of email as a "dying" technology, studies have actually found that students are more likely to use email than instant messaging and online chat rooms to contact people known to them offline. Although texting and social networking are favorites for socializing online, email is still the most frequently used form of technology for task-related communication (Recchiutti, 2003). *USA Today* published an article in 2006 entitled, "E-mail has become the new snail mail' as younger set goes with text messaging," and the *Wall Street Journal* published "Why e-mail no longer rules" three years later. Yet, studies find that increased use of social media drives increased use of email. Moreover, even non-social-media users are using email more than in the past, and people use email more as they get older (Stewart, 2009). Although it is well documented that teens do not use email often, the largest uptick in email use occurs when students enter college and then continues as these students graduate and enter the workforce (Stewart, 2009). If e-mail messages encouraging registration and driving traffic to Web-based registration tools will work for any population, it should be college students.

The experiment described in this manuscript took place at a public, four-year, regional comprehensive university in Indiana. Directory data was provided by the Registrar, upon approval of the Institution Review Board and university legal counsel. Voter registration was

ascertained by matching student directories to official voter files.⁶ Matches were made using first name, middle name, last name, address, and age.⁷

The campus was eager to test the effectiveness of e-mail for boosting voter registration because email delivery complies with federal requirements and is inexpensive to implement. The author consulted the local Information Technology office to guarantee successful delivery and avoid internal spam filters and tracked the email messages sent on campus by placing her own email address at the end of each treatment group. Using an Excel spreadsheet, every student received two messages from the PI before the Fall 2010 voter registration deadline. The message was from a university email address and contained only his or her own name in the recipient line. The analysis that follows relies on the *assignment* to treatment conditions and evaluates the overall effectiveness of the campaign to raise registration rates. In other words, it measures return on investment for a campus that promotes registration via email outreach combined with an online registration system.

RESULTS

Because randomization assures comparability across treatment conditions, unbiased estimates of the effect of the two treatment emails on voter registration rates can be derived by simply comparing the mean rates of voter registration across treatment conditions. Table 1 provides the voter registration rates for the control group and two treatment groups for all students in the experiment. The estimated intent-to-treat effect for students receiving an email encouraging them to register with a link to a printable registration form is a statistically insignificant -0.9 percentage points (s.e. = .01). Essentially, the experiment confirms that emailing links to downloadable registration forms does not increase participation rates.

TABLE 1. RESULTS FOR REGISTRATION LEVELS – ALL SUBJECTS

School	Control	Download	Online	Download Effect	Online Effect
IUSB	58.4% [2,456]	56.2% [2,454]	59.5% [2,456]	-0.009 (0.010)	0.016 (0.010)

Numbers in brackets report number of subjects.

Numbers in parentheses report standard errors.

Effects are not statistically significant.

The picture is not much better for the treatment emails linking directly the online registration sites (see Table 1). Linking students to the online registration system increased registration by a statistically insignificant 1.6 percentage points (s.e. = 0.01). In other words, for every 100,000 students emailed a link to the Secretary of State’s online registration site, would generate only one new registrant who would have otherwise remained unregistered. This treatment effect is not statistically different from zero. Thus, we can conclude that email driving traffic to Indiana’s online voter registration site was ineffective at increasing rates of voter registration. In other words, contrary to the hypothesis that the logistical burdens of printing, completing, and mailing a printable registration form made email outreach ineffective, it seems that email outreach itself is an ineffective way to boost registration rates, even with the streamlined process enabled by the change in state law.

Table 2 isolates the effects of the experiment on those previously unregistered to vote. This analysis confirms the findings state above, while providing additional support that downloadable forms may actually have a negative effect on successful registration. When limiting the analysis to students without a previous voter history, the estimated intent-to-treat effect for students receiving an email encouraging them to register with a link to a printable registration form is a statistically significant -4.9 percentage points (s.e. = .02). Essentially, the experiment confirms that emailing links to downloadable registration forms does not increase participation rates. In addition, it adds (limited) support to Bennion and Nickerson’s (2010) contention that email outreach using printable, mail-able registration forms might actually *decrease* registration rates as students who would otherwise stop by registration tables or participate in campus-wide registration campaigns put off registration knowing that they have the form and information required on their computer and planning to register at a later time – a time that never comes.

TABLE 2. RESULTS FOR REGISTRATION LEVELS – NOT PREVIOUSLY REGISTERED ONLY

School	Control	Download	Online	Download Effect	Online Effect
IUSB	31.3% [4022]	30.5% [3984]	26.4% [4036]	-0.049* (0.017)	-0.008 (0.017)

Numbers in brackets report number of subjects.

Numbers in parentheses report standard errors.

* *result is statistically significant; p = 0.003*

The analysis of previously unregistered voters also confirms the finding regarding the ineffectiveness of the online registration system to generate new registrations when paired with email outreach (see Table 2). Linking students to the online registration system decreased registration by a statistically insignificant 0.8 percentage points (s.e. = 0.02). In other words, for every 100,000 previously unregistered student emailed a link to the Secretary of State’s online registration site, would disenfranchise two students who might have otherwise registered as part of a campus-wide registration campaign. However, this treatment effect is not statistically different from zero. In sum, Indiana’s online voter registration site was ineffective at increasing rates of voter registration. In other words, contrary to the hypothesis that the logistical burdens of printing, completing, and mailing a printable registration form made email outreach ineffective, it seems that email outreach itself is an ineffective way to boost registration rates, even with the streamlined process enabled by the change in state law.

DISCUSSION

This study has several important implications. First, this experiment establishes the ineffectiveness of email outreach, even when combined with online registration systems. Prior email campaigns linking to downloadable registration forms showed no effect whatsoever (or even a negative effect, see Bennion and Nickerson, 2010). Here we replicate that earlier finding and reject the hypothesis that a fully online registration system could reverse these results, making email a cheap and effective way to register new voters. According to this study, one does

not appreciably increase registration rates by linking to the state's OLVR site. Replication of this study on other campuses and in other states will further establish this finding.

Second, this experiment suggests that arguments for online registration systems should be based on improved accuracy, efficiency, accessibility, and cost savings rather than on increased participation in the electoral process. The marginal cost of sending an email is trivial compared to the expense of distributing flyers or sending canvassers into the field. However, email, while cheap, was not efficient in increasing registration rates. Neither providing a direct link to a printable PDF form nor a link to a fully online registration system increased registration. Downloadable forms force the citizen to incur the expense of paper, ink, envelopes and stamps, whereas submitting a form online costs the citizen nothing other than time. However, even the logistical ease of the online system did not promote registration. From the perspective of the Board of Elections, the fully online voter registration system is markedly cheaper than traditional paper forms. For example, a 2010 study in Arizona found that processing each paper registration form costs \$0.83 in staff time, whereas each registration submitted online costs only \$0.03 (Barreto et al. 2010). While implementing OLVR might save money on registrations process, reduce staff time and redundancy in transferring information from paper forms to the electronic voter file, and improve the accuracy of the voter file, it does not, in itself, generate an increase in voter registration rates.

Although online voter registration systems may save the state money and might become part of a larger strategy to educate and register voters, they do not, by themselves, increase registration rates. Citizens seem unwilling to respond to email messages intoning them to register to vote. Citizens seem unwilling to print and mail forms, or even to take the time required to use consult their driver's license, enter their license number, and follow the brief steps required to register online.

For this reason, third party registration is still needed to make sure that eligible voters are not disenfranchised. A third implication of this study's findings is that public agencies like the Department of Motor Vehicles should automate the registration process so that the client only needs to sign the form and hand it back (rather than return the form later). The 1993 National Voter Registration Act required that registration materials be made available (and accepted) when citizens apply for driver's licenses or public assistance. However, the law places no requirements on how registration forms are administered or accepted and government offices vary considerably in implementation. A standardized procedure where the information already in the database (i.e., name, address, date of birth, etc.) is used to print a completed form that the citizen need only sign and return to the agent would reduce nearly all the physical and psychological transaction costs associated with registering to vote with very limited increase on the demands of the public agencies.

Finally, this study has implications for colleges and universities. Higher education institutions committed to civic engagement should focus on face-to-face approaches to voter registration. Registration tables and classroom-based registration are proven to increase registration rates among college students. In contrast, technology-based solutions, particularly email outreach, is ineffective in getting new voters on the rolls and giving them the power to get engaged on Election Day.

REFERENCES

Akerlof, G. A. (1991). Procrastination and obedience. *American Economic Review*, 81(2), 1–19.

- Alvarez, M. R., Hopkins, A & Sinclair, B. (2010). Mobilizing Pasadena democrats: Measuring the effects of partisan campaign contacts. *Journal of Politics*, 72(1), 31–44.
- Arceneaux, K. & Kolodny, R. (2009). Educating the least informed: Group endorsements in a grassroots campaign. *American Journal of Political Science*, 53(4), 755–70.
- Arceneaux, K. & Nickerson, D. W. (2009). Who is mobilized to vote? A re-analysis of seven randomized field experiments. *American Journal of Political Science*, 53(1), 1–16.
- Arceneaux, K. & Nickerson, D. W. (2010). Negative and positive campaign messages: Evidence from two field experiments. *American Politics Research*, 38(1), 54–83.
- Barreto, M. A., Glaser, B., Mac Donald, K., Collingwood, L, Pedraza, F., & Pump, B. (2009). *Online voter registration (OLVR) systems in Arizona and Washington: Evaluating usage, public confidence and implementation processes*. Report for the Pew Internet and American Life Project.
- Bendor, J., Diermeier, D., & Ting, M. (2003). A behavioral model of turnout. *American Political Science Review*, 97(2), 261–80.
- Bennion, E. A. (2005). Caught in the ground wars: Mobilizing voters during a competitive congressional campaign. *Annals of the American Academy of Political & Social Science*, 601, 123–41.
- Bennion, E. A. (2009). I'll register to vote if you teach me how: Results of a classroom-based field experiment. *Indiana Journal of Political Science*, 11, 20–27.
- Bennion, E. A. & Nickerson, D. W. (2011). The Cost of convenience: A field experiment showing that e-mail outreach decreases voter registration, *Political Research Quarterly*, 42(3), 858-869.
- Bennion, E. A. & Nickerson, D. W. (2013). Documenting the success of classroom-based voter registration efforts: Classroom trumps technology. In *Teaching Civic Engagement: From Student to Active Citizen* (pp.203-215). Washington, DC: American Political Science Association.
- Bochsler, D. (2009, September 3-6). *Can the internet increase political participation? An analysis of remote electronic voting's effect on turnout*. Paper presented at the APSA 2009 Annual Meeting, Toronto Canada.
- Brady, H. E. & McNulty, J. E. (2004, July 29-31). *The costs of voting: Evidence from a natural experiment*. Paper presented at the Annual Meeting of the Society for Political Methodology, Palo Alto, CA.
- Dale, A. & Strauss, A. (2009). Don't forget to vote: Text message reminders as a mobilization tool. *American Journal of Political Science*, 53(4), 787–804.

- Dommeier, C. J., Baum, P., Hanna, R. W. & Chapman, K. S. (2004). Gathering faculty teaching evaluations by in-class and online surveys: their effects on response rates and evaluations. *Assessment & Evaluation in Higher Education*, 9(5), 611–623.
- Druckman, J. N., Hennessey, C. L., Kifer, M. & Parkin, M. (2010). Issue engagement on congressional candidate Web sites, 2002–2006. *Social Science Computer Review*, 28(1), 3–23.
- Druckman, J. N., Kifer, M. J., & Parkin, M. (2009). Campaign communications in US congressional elections. *American Political Science Review*, 103(3), 343–66.
- Erikson, R. S. (1981). Why do people vote? Because they are registered. *American Politics Quarterly*, 9(3), 259–76.
- Feller, A. & Holmes, C. C. (2009). *Beyond top-lines: Heterogeneous treatment effects in randomized experiments*. Unpublished manuscript, Oxford University.
- Fowler, J. H. (2006). Habitual voting and behavioral turnout. *Journal of Politics*, 68(2), 335–44.
- Gerber, A. S. & Green, D. P. (2000). The effects of canvassing, direct mail, and telephone contact on voter turnout: A field experiment. *American Political Science Review*, 94(3), 653–63.
- Gerber, A., Green, D. P., & Shachar, R. (2003). Voting may be habit-forming: Evidence from a randomized field experiment. *American Journal of Political Science*, 47(3), 540–50.
- Green, D. P., Gerber, A. S., & Nickerson, D. W. (2003). Getting out the vote in local elections: Results from six door-to-door canvassing experiments. *Journal of Politics*, 65(4), 1083–96.
- Hanmer, M. J. (2009). *Discount voting: Registration reforms and their effects*. Cambridge, UK: Cambridge University Press.
- Hansen, B. B. & Bowers, J. (2009). Attributing effects to a cluster randomized Get-Out-the-Vote campaign. *Journal of the American Statistical Association*, 104(487), 873–85.
- Internet economics: A thinker’s guide. 2000. *The Economist*, April 1, 64–66.
- Kenney, M. & Curry, J. (2001). Beyond transaction costs: E-commerce and the power of the Internet dataspace. In T. Leinbach and S. Brunn (Eds.), *Worlds of e-commerce: Economic, geographical and social dimensions* (pp. 45–65). New York, NY: John Wiley.
- Krueger, B. S. (2002). Assessing the Potential of Internet Political Participation in the United States: A Resource Approach. *American Politics Research*, 30(5), 476-498.

- Krueger, B. S. (2006). A comparison of conventional and Internet political mobilization. *American Politics Research*, 34(6), 759–76.
- Lay, C. H. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, 20(4), 474–95.
- Lucking-Reiley, D. & Spulber, D. F. (2001). Business-to-business electronic commerce. *Journal of Economic Perspectives*, 15(1), 55–68.
- McNulty, J. E. (2005). Phone-based GOTV: What's on the Line? Field experiments with varied partisan components, 2002-2003. *Annals of the American Academy of Political and Social Science*, 601, 41–65.
- McNulty, J. E., Dowling, C. M., & Ariotti, M. H. (2009). Driving saints to sin: How increasing the difficulty of voting dissuades even the most motivated voters. *Political Analysis*, 17(4), 435–55.
- Michelson, M. R., Garcia Bedolla, L., & McConnell, M. A. (2009). Heeding the call: The effect of targeted two-round phonebanks on voter turnout. *Journal of Politics*, 71(4), 1549–63.
- Nickerson, D. W. (2006). Volunteer phone calls can increase turnout: Evidence from eight field experiments. *American Politics Research*, 34, 271–92.
- Nickerson, D. W. (2007a). Does e-mail boost turnout? *Quarterly Journal of Political Science*, 2(4), 369–79.
- Nickerson, D. W. (2007b). The ineffectiveness of e-vites to democracy: Field experiments testing the role of e-mail on voter turnout. *Social Science Computer Review*, 25(4), 494–503.
- Nickerson, D. W. (2007c). Quality is job one: Professional and volunteer voter mobilization calls. *American Journal of Political Science*, 51(2), 269–82.
- Nickerson, D. W. & Rogers, T. (2010). Do you have a voting plan? Implementation intentions, voter turnout, and organic plan making. *Psychological Science*, 21(2), 194–99.
- Norris, P. (2003). Preaching to the converted? Pluralism, participation, and party websites. *Party Politics*, 9(1), 21–45.
- O'Donoghue, T. & Rabin, M. (2001). Choice and procrastination. *Quarterly Journal of Economics*, 116(1), 121–60.
- Panagopoulos, C. (2009). Street fight: The impact of a street sign campaign on voter turnout. *Electoral Studies*, 28(2), 309–13.

- Plutzer, E. (2002). Becoming a habitual voter: Inertia, resources, and growth in young adulthood. *American Political Science Review*, 96(1), 41–56.
- Quintelier, E. & Visssers, S. (2008). The effect of internet use on political participation: An analysis of survey results for 16-year-olds in Belgium. *Social Science Computer Review*, 26(4), 411-427.
- Recchiuti, J. K. (2003). *College students' uses and motives for e-mail, instant messaging, and online chat rooms* (Master's thesis). University of Delaware. Retrieved from www.udel.edu/communication/web/thesisfiles/janicerecchiutithesis.pdf.
- Rock the Vote. (2009). Rock the Vote nominated for Webby award for activism. Press release, April 28, 2009. Retrieved from <http://www.rockthevote.com/about/press-room/press-releases/rock-the-vote-nominated-for.html>.
- Rosenstone, S. J. & Hansen, J. M. (1993). *Mobilization, participation, and democracy in America*. New York: Macmillan.
- Rokita, T. (2010). Indiana to begin offering online voter registration this week. Press release, June 29, 2010. Retrieved from <http://www.in.gov/sos/3684.htm>.
- Schlozman, K., Verba, S. & Brady, H. (2004). Political equality: What do we know about it? In K. Neckerman (Ed.), *Social inequality*. New York, NY: Russell Sage Foundation.
- Smith, A., Lehman Schlozman, K. Verba, S., & Brady, H. (2009). *The internet and civic engagement*. Report for the Pew Internet and American Life Project. Retrieved from <http://www.pewinternet.org/Reports/2009/15--The-Internet-and-Civic-Engagement.aspx>.
- Solomon, L. J. & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology*, 31(4), 503–09.
- Squire, P., Wolfinger, R. E. & Glass D. P. (1987). Residential mobility and voter turnout. *American Political Science Review*, 81(1), 45–65.
- Stewart, M. (October 14, 2009). Email use increasing, despite what WSJ says. In *Email Insider*. Retrieved September 1, 2012 from <http://www.mediapost.com/publications/article/115417/email-use-increasing-despite-what-wsj-says.html>.
- Tedesco, J. C. (2006). Web interactivity and young adult political efficacy. In A. P. Williams and J. C. Tedesco (Eds.), *The Internet election: Perspectives on the web in campaign 2004*. (pp. 187–202). Lanham, MD: Rowman & Littlefield.
- Timpone, R. J. (1998). Structure, behavior, and voter turnout in the United States. *American Political Science Review*, 92(1), 145–58.

- Tolbert, C. J. & Mcneal, R. S. (2003). Unraveling the effects of the internet on political participation? *Political Research Quarterly*, 56(2), 175-185.
- Tykocinski, O. E. & Ruffle, B. J. (2003). Reasonable reasons for waiting. *Journal of Behavioral Decision Making*, 16(2), 147–57.
- Vargas, J. A. (2008, November). Obama raised half a billion online. *Washington Post*. Retrieved from http://voices.washingtonpost.com/44/2008/11/20/obama_raised_half_a_billion_on.html.
- Verba, S., Schlozman, K. & Brady, H. (1995). *Voice and equality: Civic voluntarism and American politics*. Cambridge, MA: Harvard University Press.
- Verba, S., Lehman Schlozman, K. & Brady, H. E. (2004). Political equality: What do we know about it? In *Social inequality*, ed. K. M. Neckerman, 635–66. New York: Russell Sage Foundation.
- Wattenberg, M. P. (2007). *Is voting for young people? With a postscript on citizen engagement*. New York: Pearson Longman.
- Wolfinger, R. E. & Rosenstone, S. J. (1980). *Who votes?* New Haven, CT: Yale University Press.

APPENDIX A

Text from treatment emails

MESSAGE #1

Subject line: REGISTER TO VOTE NOW. Online link provided.

Politicians ignore issues college students care about because too many college students do not vote. I urge you to vote in the upcoming national election. To vote you need to first be registered.

It's easy to register to vote. Just click on this link and you can register in [STATE] right now!

[LINKED WEB ADDRESS]

Remember, the DEADLINE to register to vote in [STATE] is [DATE].
If you don't register, you won't be able to vote this year.

Let the politicians hear your voice. Please vote. Register today.

MESSAGE #2

Subject line: Time is running out to register to vote! Click URL to register.

Politicians pay attention to citizens who vote. They are not likely to care much about the issues of college students who do not vote.

Our democracy depends on voters. Our democracy depends on you voting. Are you registered to vote? You can register in [STATE] right now. Just click on this link and you can register to vote.

[LINKED WEB ADDRESS]

If you don't register by [DATE], you can't vote this year.

Get engaged, get registered to vote and then make your voice heard by voting in the national election.

¹ The authors would like to thank the Office of Research at Indiana University South Bend for their financial support of this project and our larger series of randomized field experiments.

² Ten states have some form of Election Day voter registration (EDR): Connecticut, Idaho, Iowa, Maine, Minnesota, Montana, New Hampshire, North Carolina, Wisconsin, and Wyoming. Connecticut has EDR for presidential elections only. Washington DC also offers EDR. Only North Dakota has no registration requirement (having abolished this requirement in 1951).

³ Michael McDonald, United States Elections Project, <http://elections.gmu.edu/index.html>

⁴ A project coordinator on each campus sent the email messages to ensure that all email messages were from internal email addresses. This should increase the likelihood that students trust the sender and open the message.

⁵ A 1998 amendment to the Higher Education Act requires all campuses receiving federal funding to provide registration forms to all enrolled students.

⁶ The voter file was maintained by Catalist, which collects official state voter files, performs maintenance on the file (e.g., resolving duplicates), and cross-checks the information with available consumer databases.

⁷ Name, address, and date of birth are considered directory information and are not considered "private" data under FERPA. However, some institutions, including the one featured in this experiment, have elected to designate date of birth as "private" data which cannot be shared with anybody off campus (or people on campus who do not need this information for specific, legitimate purposes related to their assigned duties). For this reason, age groups were provided to help distinguish between people (e.g. parent and child) with the same name and address.