

Learning to Turn Out: Effects of Actionable Instruction on Student Voting

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Version: April 21, 2025

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Abstract

Because voting is habitual, promoting turnout among novice voters holds promise as an efficient focal point for voter turnout efforts. Without a framework built from prior experience, novice voters lack *procedural efficacy* regarding turnout. As with any learners encountering a new process, novice voters face an interaction of psychological and technical barriers, such that small logistical hurdles present outsize obstacles to initiating the task. Here, the researchers present the results of a university-wide field experiment, with data collected over five election cycles, that tests the hypothesis that student voters benefit from an approach focused on helping them learn how to vote. They find that providing simple messages with actionable instruction in voter turnout has a large and sustained effect on voter turnout; that resource-intensive personalization of the voter turnout support provides little added benefit; and that highly-personalized reminders without actionable instruction have no effect on voter turnout. These findings are especially important for institutions with tight resource constraints, highlighting a low-resource avenue through which to support students in becoming civically engaged.

1. Introduction

Voting is a learned behavior, and a habit-forming behavior. Evidence from randomized controlled get-out-the-vote (GOTV) experiments demonstrates that turning out to vote, in itself, increases a person's probability of voting in subsequent elections (Coppock & Green, 2016). Helping first-time voters learn to turn out thus holds promise as an efficient focal point for efforts aiming to increase turnout generally.

A high proportion of students enrolled in post-secondary education are prospective first-time voters. Many of these students are newly eligible to vote when they matriculate. Institutions of higher ed are well-situated to reach and support those prospective first-time voters. Moreover, through The Higher Education Opportunity Act, colleges and universities have a mandate to facilitate student voting (Bennion & Michelson, 2023).

Recognizing the strong positive correlation between age and political participation, researchers have singled out the youth vote, and student voter turnout as a special case, in efforts to understand and rectify low turnout among young people (e.g., Converse, 1971; Nie et al., 1974; Highton & Wolfinger, 2001; Niemi & Hanmer, 2010; Holbein & Hillygus, 2020). Shifting focus away from these potential voters' identity as youth *per se*, or even as students, to their status as novices—people encountering a new task for the first time (see, e.g., Condon & Holleque, 2013; Plutzer, 2002)—provides a useful perspective for identifying potential means of increasing youth turnout rates.

Theories of behavior change (Bandura, 1977; Bouton, 2000) and empirical evidence from learning sciences (e.g., Kirschner et al., 2006; Renkl & Atkinson, 2003) both underscore that a person's first time taking on an unfamiliar task is a special type of encounter. Without a pre-existing framework built from personal experience, even relatively straightforward tasks—especially multi-step tasks—lead easily to intimidation, overwhelm, and failure to initiate (Kalyuga et al., 2003). Novice learners benefit from support in engaging the task, breaking it into component steps, and explicit direction on the critical features (Wood et al., 1976).

Research on voter turnout has often focused on either psychological or institutional factors. For example, identifying the right motivating message, whether communicated through the political surroundings (Gimpel et al., 2003) or through more explicit prompting from campaigns (Niemi & Hanmer, 2010); or on finding the most effective modes of communication for such messages (Bergan, 2011; Green & Gerber, 2024). Research into institutional or logistical barriers has examined what rules around voting can be changed to increase voter turnout, like Election Day registration (Burden & Neiheisel, 2013), preregistration (Holbein & Hillygus, 2016; 2017) or voter identification laws (Barreto et al., 2009).

Building on work in the learning sciences and behavioral change literatures, our primary hypothesis is about the interaction of the psychological and institutional/logistical: that a key barrier to youth turnout arises not from a deficit of motivation nor from any particular logistical hurdle, but rather from the psychological and technical difficulty of navigating any new process for the first time. When encountering a new process, small logistical barriers can present outside obstacles to initiation of the task (Bandura, 1977).

Taking the perspective of post-secondary students as novice voters, we focus on the mundane but genuine challenge involved in learning how to turn out. A large body of research shows that novices learn best from explicit, step-by-step instruction (Sweller et al., 2011; Clark et al., 2012). From this we hypothesize that direct, real-time guidance is a crucial aid in helping novice voters overcome the cognitive barriers involved in casting a ballot for the first time.

In the lead-up to the 2018 midterm elections, we conducted a student voter turnout field experiment to test interventions designed to support people who are learning how to cast a ballot. Our main treatment focuses on providing clear, timely guidance on turnout: immediately actionable instructions aimed at helping students overcome the barriers of undertaking an unfamiliar task. Further, drawing from voter turnout literature indicating that personalization increases the effectiveness of turnout appeals (e.g., Burgess et al., 2000; Bryan et al., 2011; Bedolla & Michelson, 2012), our design also varies the level of personalization the treatments feature. Finally, we test whether a planning encouragement serves as an additional aid facilitating turnout for novice voters (Gollwitzer, 1999; Gollwitzer & Sheeran, 2006).

We find strong and sustained effects of providing students with actionable instruction on how to cast a ballot: the treatments significantly increased average turnout not only in the immediate electoral context (2018 midterm elections) but also in the following election cycle's primary and general elections (2020). There is some indication that personalization provides added benefit to the instruction-based treatments, but the increase is variable and on the whole not significantly greater than actionable instruction without personalization. A highly personalized motivation-based treatment without actionable instruction shows no effect on turnout.

2. Background: Voter turnout and youth voting

One of the most reliable findings in studies of voting behavior is that age predicts turnout (Dassonneville, 2017): young people vote at lower rates than older people, with turnout increasing in a nearly linear fashion with age (Leighly & Nagler, 2014). There is no consensus on why this relationship exists. Stage of life (Highton & Wolfinger, 2001; Smets, 2012), learning and habit-formation (Denny & Doyle, 2009; Dinas, 2012; Franklin, 2004; Plutzer, 2002), and societal norms (Fieldhouse & Cutts, 2012; Goerres, 2007) may all play a role, and the highly confounded effects cannot be easily untangled.

Studies of youth voting indicate that turnout among young people is influenced by largely the same factors as older adults, with some additional considerations. College students show similar demographic and motivational predictors and respond similarly to campaign contact when compared to older voters (McNaughton & Brown, 2020; Niemi & Hanmer, 2010)—but they face a number of additional barriers that older voters do not face. For example, basic costs like finding one's polling location disproportionately affect young people compared to older voters, who are more likely to already know their polling location and more likely to have gone through the process of locating a new polling place for the first time if theirs has changed (Brady & McNulty, 2011).

Survey evidence suggests that lower youth turnout is not a result of apathy or disinterest in politics (Benenson et al., 2016; Holbein & Hillygus, 2020). Holbein, Hillygus, and co-authors report that follow-through, rather than a lack of interest, seems to be the major barrier to youth turnout (Holbein et al., 2020; Holbein & Hillygus, 2020). So, while young adults are generally interested in politics and motivated to participate, interest and motivation alone may not be enough to facilitate voter turnout without additional support.

Personalization, in various manifestations, has proven effective in increasing voter turnout. Gerber and Green (2000) highlight the importance of personal (e.g., canvassing) versus impersonal (e.g., phone bank) modes of contact in stimulating voter turnout, and in their

evaluation of over 20 years of voter turnout field experiments, conclude that personalization emerges as one of the most effective mobilizing strategies (Green & Gerber, 2024, p. 169).

In addition to personal vs. impersonal modes of contact, personalization of content appears to increase turnout as well. Social media appeals with visuals of friends who reported voting lead to higher turnout than strictly informational appeals (Bond et al., 2012). Personal live communication from friends, family, neighbors, and acquaintances is especially effective at increasing turnout as the support messages are more credible coming from a known and trusted contact and also contain a degree of accountability because the potential voter is likely to interact with the contact again in the future (Green & McClellan, 2020). Personalization in terms of invoking the self has also shown signs of effectively promoting turnout. Using language that invokes voting as an expression of self, such as “How important is it to you *to be a voter* in the upcoming election?” instead of “How important is it to you *to vote* in the upcoming election?” is associated with higher rates of voter turnout (Bryan et al., 2011). Additionally, young adults who were mailed back personal pledge cards that they had previously filled out with their reason for voting were more likely to vote than their counterparts who received a generic pledge card (Burgess et al., 2000).

Alongside personalization, Green and Gerber (2024) identify follow-up as another one of the most reliable mobilization tactics emerging consistently from field experimental results on voter turnout: “Building on voters’ preexisting level of motivation... [by] recontacting a voter who previously pledged to vote appears to be an effective mobilization tactic.” (Green and Gerber, 2024, p. 169).

Additionally, making a voting plan encourages turnout. Research on implementation intentions indicates that asking people about their plans helps them to reduce the intention-behavior gap and fulfill goals, particularly with new behaviors (Anderson et al., 2018). Asking people what time they will vote, where they will be coming from, and what they will be doing beforehand increases turnout, especially for those in single-eligible-voter households as they are less likely to already have a voting plan in place when asked (Nickerson & Rogers, 2010). This effect on turnout is also conditional on having access to sufficient information about how to vote as it lessens the cost of collecting information to develop the plan and allows people to check that their plan will be effective (Anderson et al., 2018).

While institutional reforms like same-day registration and voting by mail undoubtedly reduce barriers to voting, they are unlikely to provide a stand-alone solution to low youth turnout (see, e.g., Hamel et al., 2024). Indeed, electoral reforms designed to lower the costs of casting a ballot have tended to exacerbate inequalities in participation, largely facilitating voting for people who are already inclined to vote rather than increasing turnout among low propensity voters (Berinsky, 2005; Burden & Neiheisel, 2013; Karp & Banducci, 2000).

3. Theory

3.1. The barrier of know-how for novice voters

Our central focus in this study is on the unique interaction of psychological and institutional barriers experienced by novice voters. We propose that GOTV efforts focused solely on motivations or costs have underestimated the obstacle that even small barriers pose to first-time voters—the outsize effect of simple know-how, or *procedural efficacy*. We orient our efforts in promoting youth turnout around helping prospective voters past the initial barrier of casting their first ballot. As indicated by research on novice learners, our main intervention provides direct, actionable instruction to help overcome the cognitive barriers in navigating a new process for the

first time. That is, we focus on learning to turn out—in contrast to motivating turnout or lowering structural barriers—as a promising avenue for promoting turnout among new voters.

This account fits within the developmental framework set out by Plutzer (2002): we identify timely, actionable instruction as a tool for helping potential voters, many facing their first election, transition from the inertial state of nonvoting to voting. Whether or not a person attempts a new behavior depends heavily on whether they feel capable of performing the necessary activities involved (Bandura, 1977). Condon & Holleque (2013) find that general self-efficacy (i.e., an abiding belief in one's own capacity for agency in life) plays an important role in young people's decision to enter the electorate. Our intervention approaches the concept of efficacy from a different angle: while Condon & Holleque's (2013) work examines the trait-like quality of abiding general self-efficacy in an essentially motivational capacity, our treatments target a more immediate and material form of efficacy expectations—procedural efficacy.¹

Novice voters, by definition, do not have access to the most dependable source of efficacy expectations—i.e., “the experience of mastery arising from effective performance” (Bandura, 1977, p. 139). Lacking the experience of having successfully executed the process before, novice voters may not feel capable of adequately performing or even knowing all the steps necessary to casting a ballot. Our intervention aims to provide a substitute for the experience of effective performance, bolstering procedural efficacy expectations instead by providing direct, actionable instruction in how to turn out.

Civic education programs, which often focus on fact-based, rather than practice-based, forms of political knowledge, have shown little promise in promoting political participation (Holbein & Hillygus, 2020; Persson & Oscarsson, 2010; Weinschenk & Dawes, 2022). Literature in learning science makes clear that such an approach is bound to be inefficient at best (see, e.g., Sweller et al., 1998). What learners need when encountering a new task for the first time is clear instruction: “Controlled experiments almost uniformly indicate that when dealing with novel information, learners should be explicitly shown what to do and how to do it.” (Kirschner et al., 2006, p. 79).

Holbein and Hillygus (2020, 2023) compellingly argue for civic education that aims to help students develop the non-cognitive skills required for democratic participation: capacities for planning, self-regulation, perseverance through obstacles, and other intra- and inter-personal skills. Our hypothesis regarding the provision of direct, timely, and actionable instruction builds on Holbein and Hillygus's (2020) identification of follow-through, rather than motivation, as a major obstacle to youth turnout; but in contrast to their emphasis on developing the broad psychosocial skills required for democratic participation, we focus on general principles regarding human cognitive architecture and the demonstrated benefits of direct instruction in

¹ Condon & Holleque (2013) provide an excellent taxonomy of the various forms of efficacy, distinguishing general from specific and noting that both internal political efficacy and external political efficacy are forms of specific efficacy. The *procedural efficacy* expectations we target are a form of specific efficacy, but distinct from the internal political efficacy Condon & Holleque (2013) discuss. In Bandura's (1977) definition, “An efficacy expectation is the conviction that one can successfully execute the behavior required to produce the outcomes.” (p. 141). The procedural efficacy expectations we target are the most material or practice-based instantiation of Bandura's concept: we define procedural efficacy as an individual's confidence that they know and can execute the steps required to undertake a task. To illustrate the distinction using Condon & Holleque's (2013) hypothetical internal monologue, the authors write that a young adult “trying to assess internal political efficacy may think: ‘I'm not certain whether or not I can do what is required to participate in politics because I haven't tried yet, but my parents participate. If they can do it, I probably can too.’” (p. 170). In contrast, the procedural efficacy expectations we are interested in would simply be represented by the thought, “I'm not certain exactly *what* is required to participate in politics.”

undertaking a task, however simple, for the first time (see Kalyuga et al., 2003; Kirschner et al., 2006).

Task simplification, or breaking a multi-step task into component parts, is an important element of novice instruction (see, e.g., Wood et al., 1976). Our design accomplishes this through a two-stage process that largely isolates the procedure of voter registration from the procedure of casting a ballot. Thanks to a highly successful university-wide voter registration program, in which each incoming student attending student orientation is personally invited to register, our study begins with a population of students that is largely already registered to vote. Universities that have adopted an “Ask Every Student”-type model like ours have seen significant increases in voter turnout (see Bennion & Michelson, 2023).

This practice has several implications that are likely to increase the efficacy of a follow-up turnout intervention. Prior to the study, (1) contact regarding the voting process is already established, so students have some familiarity with the university’s efforts to promote voter turnout; (2) for most students in the population, one of the steps in the turnout process (i.e., registration) has already been accomplished, simplifying the task at hand; and (3) by registering to vote, those students have taken an active step, instilling a degree of commitment to casting a ballot. Each of these factors help pre-condition the population for receptivity to treatment (see, e.g., Weisbuch et al., 2003 on familiarity; Bandura & Schunk, 1981 on decomposition to simpler tasks; Bryan et al., 2010 on commitment), serving as groundwork that increases the likelihood our turnout interventions will be effective.

Two recent field experiments among student populations (Bennion & Nickerson, 2022; Bergan et al., 2022) provide strong indication of the promise of timely, actionable instruction in promoting student voting. Bennion & Nickerson (2022) find that an email encouraging registration and linking directly to an online voter registration portal increased both registration and turnout among voters. Bergan et al. (2022) find that practical, in-classroom turnout information sessions increase turnout among the subset of students who were already registered prior to the intervention. Our experimental design combines elements of these two informative studies, and departs from them in some important respects. Like Bennion & Nickerson (2022), our design uses initial and follow-up emails with direct links that guide students to immediately actionable steps in the turnout process. In contrast to that study, due to the first-stage voter registration process, our treatments are able to focus primarily on voter turnout (i.e., casting a ballot), as opposed to registration. Bergan et al.’s (2022) findings of large treatment effects among already-registered students underscores what may be the most important factor distinguishing our study: a highly-registered student population as a baseline from which to test our intervention of emailing immediately-actionable guidance in casting a ballot (see also Ulbig & Waggener, 2011).

3.2. Hypotheses

Our primary hypothesis pertains to the interaction of psychological and logistical barriers for novice voters. For first-time voters, the presence of *any* logistical obstacles can be sufficiently intimidating to prevent turnout. New prospective voters need clear, timely, and actionable guidance in taking the steps required to cast a ballot.

H1) Providing instruction on how to cast a ballot that is direct (what steps need to be taken), immediately-actionable (steps can be taken immediately upon receiving the instruction), and

timely (instruction is given and followed-up on during the turnout window) will increase student voter turnout.

Our second hypothesis follows from the GOTV literature indicating that personalization increases the effectiveness of voter turnout appeals.

H2) Personalization of the GOTV intervention will increase student voter turnout compared to impersonal (i.e., not personalized to the recipient) interventions.

Finally, we hypothesize that plotting out how to undertake the steps required to cast a ballot will ease intimidation for new prospective voters and serve as an aid to voting.

H3) Encouragement to establish a voting plan will increase student voter turnout.

4. Study context and experimental design

4.1. Study context

The experiment was conducted at a midwestern university in the lead-up to the 2018 U.S. midterm elections. This period was marked by a high level of enthusiasm with turnout in the 2018 House, Senate, and Gubernatorial primaries substantially higher than in 2014 (Geiger, 2018). Party control of Congress was a major factor for around three-quarters of registered voters with the Donald Trump presidency another salient factor (Geiger, 2018). Other top issues for voters included healthcare, the economy, and immigration with sharp partisan divides over the particulars of each issue. This enthusiasm translated to a midterm voter turnout rate over 50% for the first time since 1982 (Flores, 2019) and a 79% increase in turnout for voters ages 18-29 from the 2014 midterms (Misra, 2019). Ultimately, Democrats took control of the House while Republicans retained control of the Senate.

The subject pool for this experiment was students who attended first-year orientation in the fall of 2015, 2016, or 2017 (Experiment 1) and students who visited a campus-wide voter registration station in fall of 2018 (Experiment 2).

Each fall starting in 2011, the campus Center for Civic Engagement (CCE) has conducted a highly successful voter registration drive as part of student orientation. CCE is a campus department that helps students connect their learning to the broader community and civic life. When incoming students arrive to campus in the fall, as a step in their orientation process, a trained peer voting educator checks in with them about their voter registration status. Eligible students receive some basic information about their rights as student voters, and are offered the opportunity to register to vote, change or update their voter registration; or in federal election years, request an absentee ballot to vote by mail, in any of the 50 states (as applicable). Students needing voter services complete the required forms on the spot, and can access support with form completion, copies of IDs, stamps and mailing, even notary services if needed. In the orientation process, CCE tries to get every student to fill out their form, whether or not the student needs any services at the moment. Students are not required to participate in the process, but simply by being offered the opportunity, this process achieves registration rates of over 90% of eligible voters seen by the end of a single day's effort. CCE also offers similar services to returning

students each election season, through campus-wide voter registration stations that are available to any student on a drop-in basis.

Resulting from these processes, the subject pool for Experiment 1 comprises 68% of the incoming class in 2015 (referred to in the analysis below as 2018 seniors), 79% of the incoming class in 2016 (2018 juniors), and 84% of the incoming class in 2017 (2018 sophomores). The subject pool for Experiment 2 is an opt-in sample of 584 students who visited the voter registration station, located in a thoroughfare of the student center, which was open to any student who chose to stop by.

4.2. Experimental design

To test our hypotheses about actionable instruction (H1), personalization (H2), and planning (H3), we conducted two separate experiments encompassing five treatments. Hypotheses 1 and 2 were tested through treatments providing (i) actionable instruction + personalization (Ambassador treatment); (ii) actionable instruction only (NU Votes treatment); and (iii) personalization only (Self-reminder treatment). Hypothesis 3 was tested by crossing the Ambassador (i) and NU Votes (ii) conditions with a plan-making prompt (versus no planning prompt). This cross produced four treatment groups—Ambassador with/without planning prompt; NU Votes with/without planning prompt—in addition to the Self-reminder treatment group (not crossed with planning).

4.2.1. Experiment 1 – Ambassador & NU Votes treatments

In October 2018, students who had attended first-year orientation in the fall of 2015, 2016, or 2017 were randomly assigned to either the Ambassador treatment (actionable instruction + personalization), in which students receive a set of two sequential personalized emails directly from a “personal voting ambassador”; the NU Votes treatment, in which students receive a set of two sequential mass emails from the NU Votes program; or the control group. Half of each treatment group was randomly selected to receive an encouragement to write out their plan for voting, delivered in the second email in the series. The other half of each treatment group received the second email without the request for a voting plan.

4.2.1.1. Ambassador treatment

Student employees at the campus Center for Civic Engagement were recruited to serve as student Voting Ambassadors. Seventeen Voting Ambassadors took part in one 2.5-hour training session to learn about the role, which was described in part as follows:

As a Personal Voter Ambassador, your assignment is to be available for each of your students as a resource and a support person. Your main job is to **respond to their questions and help them through the voting process** in any way you can. Please engage with your students however best helps them!

Each Voting Ambassador was assigned a randomly selected group of 24 students. Because voting laws and processes vary by state, to minimize the informational burden on Voting Ambassadors, each was assigned students from a single state. To prioritize personal connection with their assigned students and Ambassador familiarity with their assigned state, Ambassadors were assigned groups of students from their home state where possible (7 ambassadors from Illinois, 1 from California, 1 from Florida, 1 from New York, 1 from Minnesota). The remaining six

ambassadors were assigned at random to the remaining large-representation states (Massachusetts, New Jersey, Ohio, Pennsylvania, Texas, and Wisconsin).

About two weeks prior to the election (Oct. 23 and 24), Voting Ambassadors sent out initial emails to their assigned students. In these emails Ambassadors addressed the recipient by name, introduced themselves (their name, year in school, and college within the university) and continued:

“I’m also a Student Voter Ambassador with NU Votes, and I’m here to provide any help you might need to participate in the midterm elections coming up on Tuesday, Nov. 6!

Please think of me as your personal point of contact to help you with anything and everything related to voting in this election.”

The email then inquired about the individual’s voter registration as recorded in previous contact with NU Votes: “It looks like you may have worked with NU Votes in the past to register in New York. Are you still registered and planning to vote in NY? If so, do you need any help requesting an absentee ballot or anything else?” The Ambassadors then closed the email, providing additional direct contact information (e.g., phone number) if they desired.

Follow-up emails were sent about one week prior to the election (Oct. 29 and 30). For the follow-up email, each Ambassador’s student contacts were divided into two groups: Group A received an email including the date of the election, encouragement to mail their ballot by the next day if voting by mail, and a link to locate their polling place for early or Election Day voting. The email closed with, “Vote! And let me know if you have any additional questions about voting!” as well as direct contact information if desired.

Students assigned to Group B received an email from their Voting Ambassador that was the same as that sent to Group A students, with the addition of planning prompt. Before the closing, Group B’s follow-up email contained the following text:

Meanwhile, would you mind sharing your plan for voting with me?

Voting Absentee? Plan to fill out & mail your ballot:

Date I plan to research & fill out my ballot:

Time I plan to research & fill out my ballot:

Date I plan to mail my ballot:

Time I plan to mail my ballot:

Where will you go to mail your ballot?

Voting in Person (Early or on Election Day)? Plan to cast your ballot:

Date I plan to cast my ballot:

Time I plan to cast my ballot:

Where will you be coming from? (e.g., class, gym, home)

Where will you go after voting?

4.2.1.2. NU Votes treatment

Students assigned to an NU Votes condition received a set of two mass-mailing emails on the same timeline as those sent by the personal Voting Ambassadors.

The first email urged people to take a break from what they were doing to get their vote in order, and included links for checking registration status; requesting an absentee ballot; information and dates for voting in person, early, or absentee; and a link to an NU Votes Midterm Elections Education Guide (an online guide and FAQ resource designed to provide students with basic information about the upcoming election, resources to learn about candidates and issues on the ballot, and details and resources they may need to help them successfully cast their ballot – e.g. where can I find a notary if my ballot requires one?). The email closed with an encouragement to contact NU Votes with any questions or for more information.

For the follow-up email, students in the NU Votes condition were randomly divided into two groups, as in the Voting Ambassadors conditions. Students assigned to NU Votes Group A received a follow-up email that was the same as the Voting Ambassador Group A email except that instead of closing with a personalized sign-off and direct contact information, the NU Votes email closed with, “Vote! CCE is here if you have any additional questions about voting!” and contact information for CCE.

Students assigned to NU Votes Group B received the same follow-up email as NU Votes Group A with the addition of the statement, “Don’t forget to make a plan to vote!” and the same planning outline as included in the Voting Ambassador Group B follow-up.

4.2.1.3. Sample and random assignment

Experiment 1 involved students who attended the first-year orientation in 2015, 2016, or 2017 (i.e., sophomore-, junior-, and senior-year students at the time of the study) and filled out a form offering them the opportunity to register to vote, change or update their registration, or (in 2016) request an absentee ballot.

Random assignment of students from this subject pool occurred within home-state and within grade-level. In order to match Voting Ambassadors with groups of students from a single state, students from states with large representation within the subject pool were randomly assigned to one of three conditions: Ambassador, NU Votes, or control. These states included Illinois (with 7 home-state Ambassadors and 2,063 students across 2015-2017 orientation) as well as the 10 next-largest states in terms of student representation: California, Florida, Massachusetts, Minnesota, New Jersey, New York, Ohio, Pennsylvania, Texas, and Wisconsin. Students from states with smaller representation were randomly assigned to NU Votes or control. Within the NU Votes and Ambassador treatment groups, students were randomly assigned to either a planning-prompt condition or a no-planning-prompt condition.

Table 1

Experiment 1 conditions.

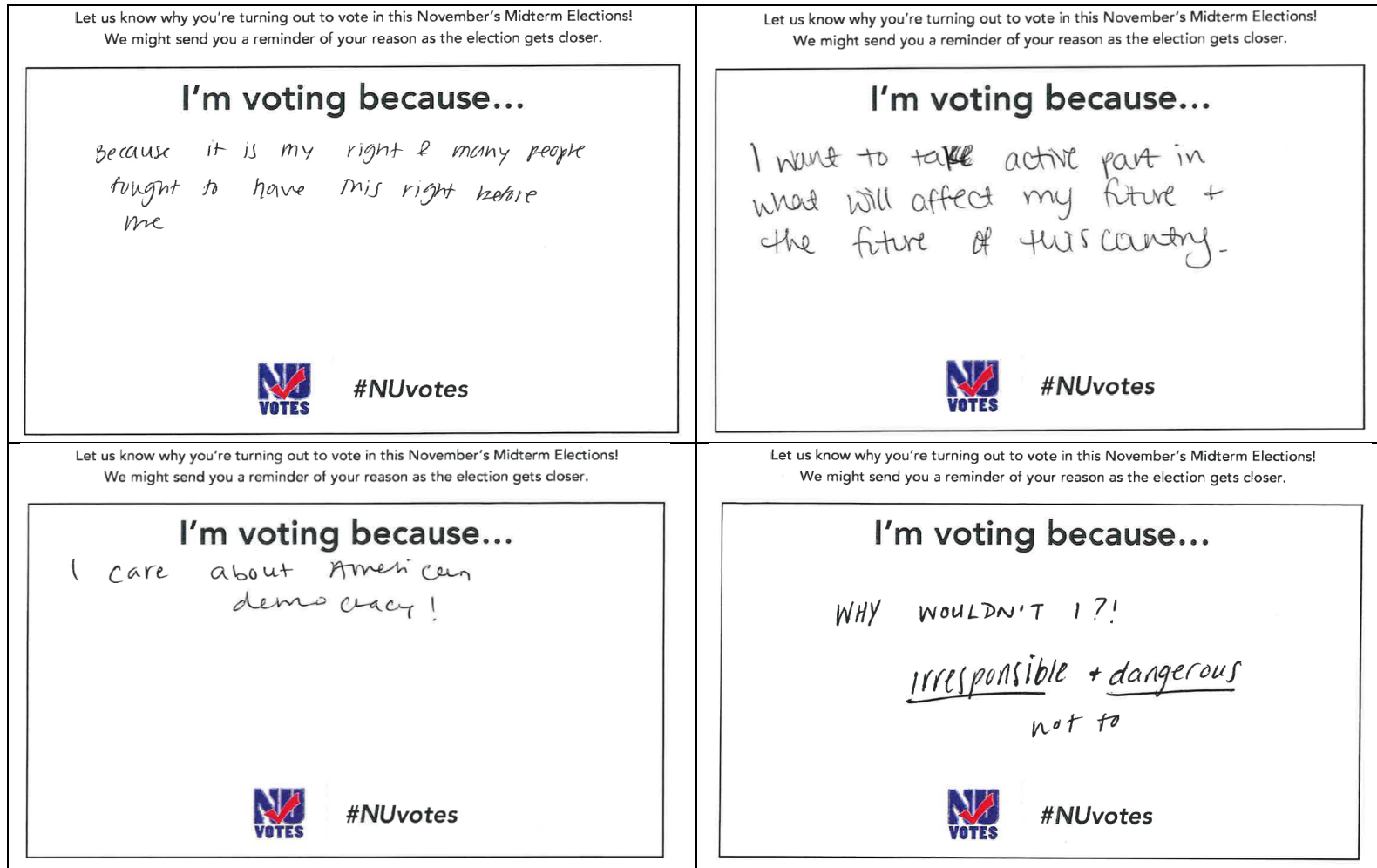
	Low-personalization	High-personalization	Control
No plan-making	<i>NU Votes Group A:</i> Mass info & reminder emails n = 731	<i>Ambassador Group A:</i> Personal Voting Ambassador emails n = 184	No contact n = 2475
Plan-making	<i>NU Votes Group B:</i> Mass info & reminder emails with planning prompt n = 755	<i>Ambassador Group B:</i> Personal Voting Ambassador emails with planning prompt n = 182	

4.2.2. Experiment 2 – Reminder from yourself: “I’m voting because...”

Experiment 2 involved students who visited a voter registration station at the student center during the first week of classes. As in previous years, students who visited the station were invited to fill out a form to register to vote, check their registration status, or request an absentee ballot, and CCE staff helped them with any needed services on the spot. At the 2018 station, all students who filled out a form were also invited to fill in a placard on the back of the form, which included the statement “I’m voting because...” Students were invited to have their picture taken holding the placard for posting on social media before the form was collected for processing.

Three hundred and fifty students filled out the placards stating their reason for voting. Half of those students were randomly selected for the treatment group. Approximately one week before the election (Monday, October 29), students assigned to the treatment group were sent an email that contained a scanned color image, embedded in the email body, of their hand-written reason for voting. The control group was not contacted.

Fig. 1. Examples of self-reminder placards in Experiment 2.



4.2.3. Outcome measures

Student directory data from the samples for Experiments 1 and 2 were matched with voter turnout files by a private vendor (Catalist, LLC). Through this process we were able to obtain voter turnout data for all states represented in both samples over five election cycles: 2018 general, 2020 primaries, 2020 general, 2022 primaries, 2022 general. The main outcome variable we examine for each of these elections is whether an individual cast a ballot in that election. As a secondary outcome variable, we calculate an individual's vote propensity as the proportion of those five election cycles in which the individual cast a ballot.

5. Analysis & Results

5.1. Direct effects of actionable instruction & personalization, Experiments 1 & 2

Figure 2 plots the average treatment effect for each of the three main treatments (NU Votes, Ambassador, Self-reminder) over the five election cycles in our dataset, with fixed effects for voter state and grade-level at the time of treatment (i.e., grade level in 2018).

The results provide support for Hypothesis 1, that actionable instruction will increase turnout. Figure 2 shows that the NU Votes (actionable instruction) and Ambassador (actionable instruction + personalization) treatments significantly increase voter turnout in the immediate electoral contest (2018) as well as in the following primary (2020p) and general election (2020g) cycles. The NU Votes treatment increases turnout between 4-5 percentage points, and the Ambassador treatment between 7-10 percentage points. For both treatments, the effect disappears by the next midterm election in 2022 (primary and general).

There is no statistically significant support for H2, that personalized treatments will increase turnout more than impersonal treatments. Except for the 2020 primary election, the difference between the estimated effects for the Ambassador (personalized) and NU Votes (not personalized) treatments is not statistically significant (see Appendix Table A.1). The Self-reminder treatment (personalization-only) shows no significant effect in any of the five election cycles. OLS estimates of average treatment effects for the NU Votes, Ambassador, and Self-reminder treatments in each election are shown in Appendix Tables A.1 and A.2.

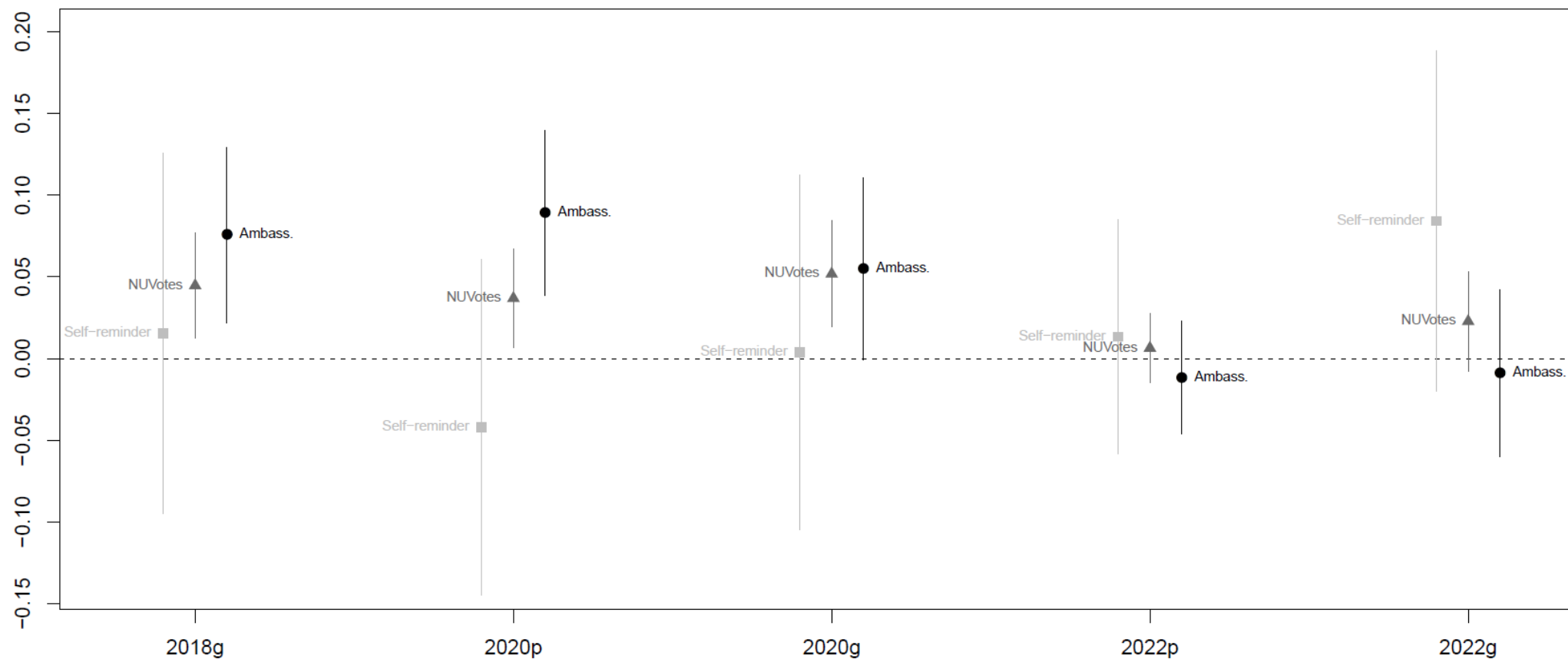


Fig. 2. Direct effect of Self-reminder, Ambassador, and NU Votes treatments.

Note: Plotted lines represent the average treatment effect of Self-reminder (square marker), NU Votes (triangle marker), and Ambassador (circle marker) treatments assignment over five elections. Treatment effects are estimated using OLS with fixed effects for voter state and grade-level at the time of treatment and plotted with 95% confidence intervals.

5.2. Treatment effect by cohort, Experiment 1 (Ambassador and NU Votes)

Dissipation of the NU Votes and Ambassador treatment effects by the time of the 2022 primary and general election cycles could come about because a large proportion of students in the sample had likely graduated and moved away from campus by that time, potentially placing students into a newly unfamiliar voting environment that required a new set of turnout instructions. The last cohort of students from the Experiment 1 sample to complete their senior year would have done so in the spring of 2021, prior to the 2022 election cycles. Guidance in how to cast a ballot, either by voting locally or by mailing a ballot to one's home state, could be rendered irrelevant if the voter moves from their registered address.

Plotting treatment effects among the three cohorts separately over the five election cycles provides a look at whether treatment effects tend to decline after a cohort has completed their senior year, at which point a large proportion of students will graduate and relocate. For students in their senior year at the time of treatment, this would have occurred following the 2018 general election; for those in their junior year, after the 2020 primary election; and for those in their sophomore year, after the 2020 general election.

Figures 3a and 3b break out the effect of the actionable instruction (Figure 3a - NU Votes) and actionable instruction + personalization (3b - Ambassador) treatments by grade-level, i.e., whether the voter was a sophomore-, junior-, or senior-year student when the treatment was delivered. Vertical lines mark when each cohort completed their senior year. We see no clear pattern of treatment effects declining in the wake of a cohort's senior year. Instead, all three cohorts show some indication of positive treatment effects in the 2018 and 2020 election cycles, with substantial decline in the 2022 midterm primaries, and some sign of bouncing back (at least among the youngest cohort) in the 2022 midterm general election.

An alternative possibility, masked by looking only at treatment effects, is that the turnout boost delivered by the treatments does not wane so much as the untreated cohort-mates, in the process of aging, simply catch up with the turnout rates of their treated peers over the course of four years. Mean turnout rates in the treatment and control groups do not support this explanation. Turnout declined within both treatment groups and the control group from the 2018 midterm election to the 2022 midterm election, with a slightly greater decline in the treatment groups than in the control group (see Appendix Tables A.3-A.5).

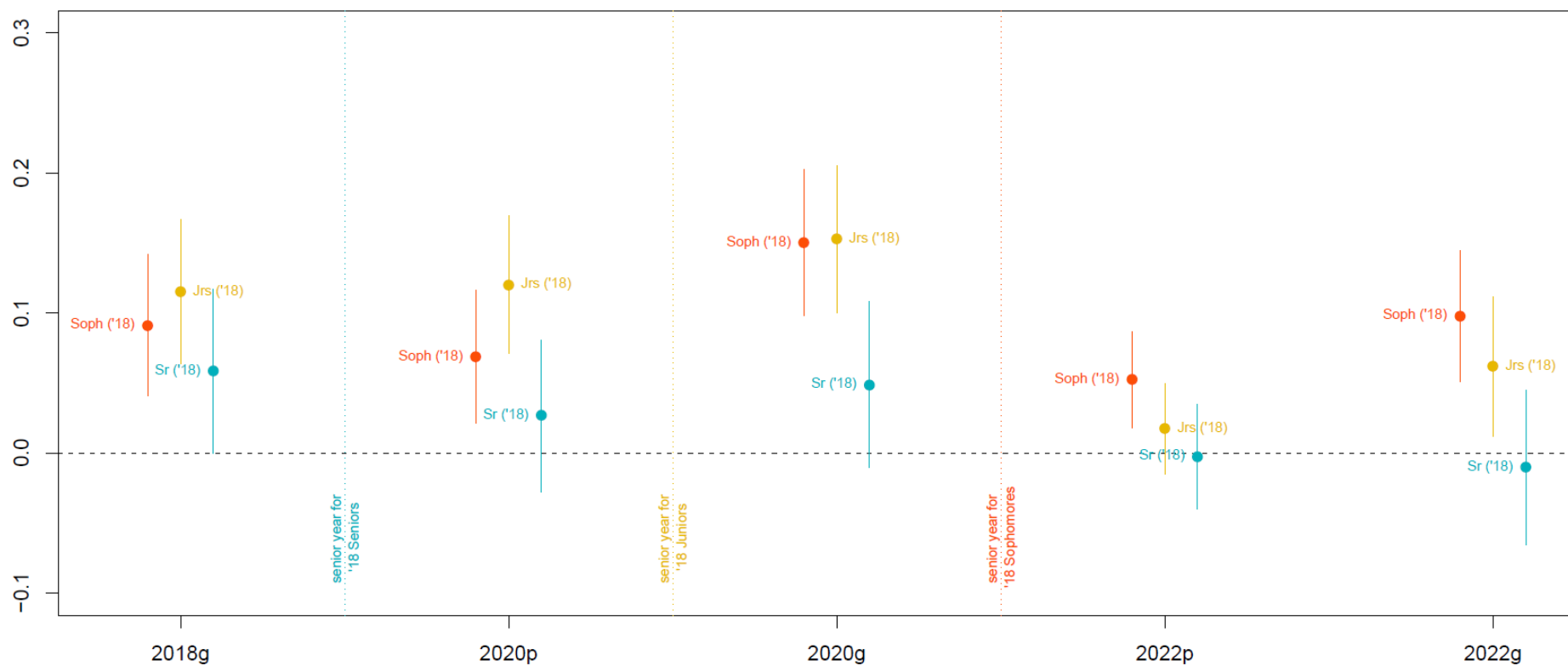


Fig. 3a. Average treatment effect of NU Votes treatment by 2018 grade-level.

Note: Average treatment effect of NU Votes treatment for Sophomore (orange), Junior (yellow), and Senior (blue) 2018 grade-levels over five elections. Vertical lines mark when each cohort completed their senior year. Estimates are plotted with 95% confidence intervals.

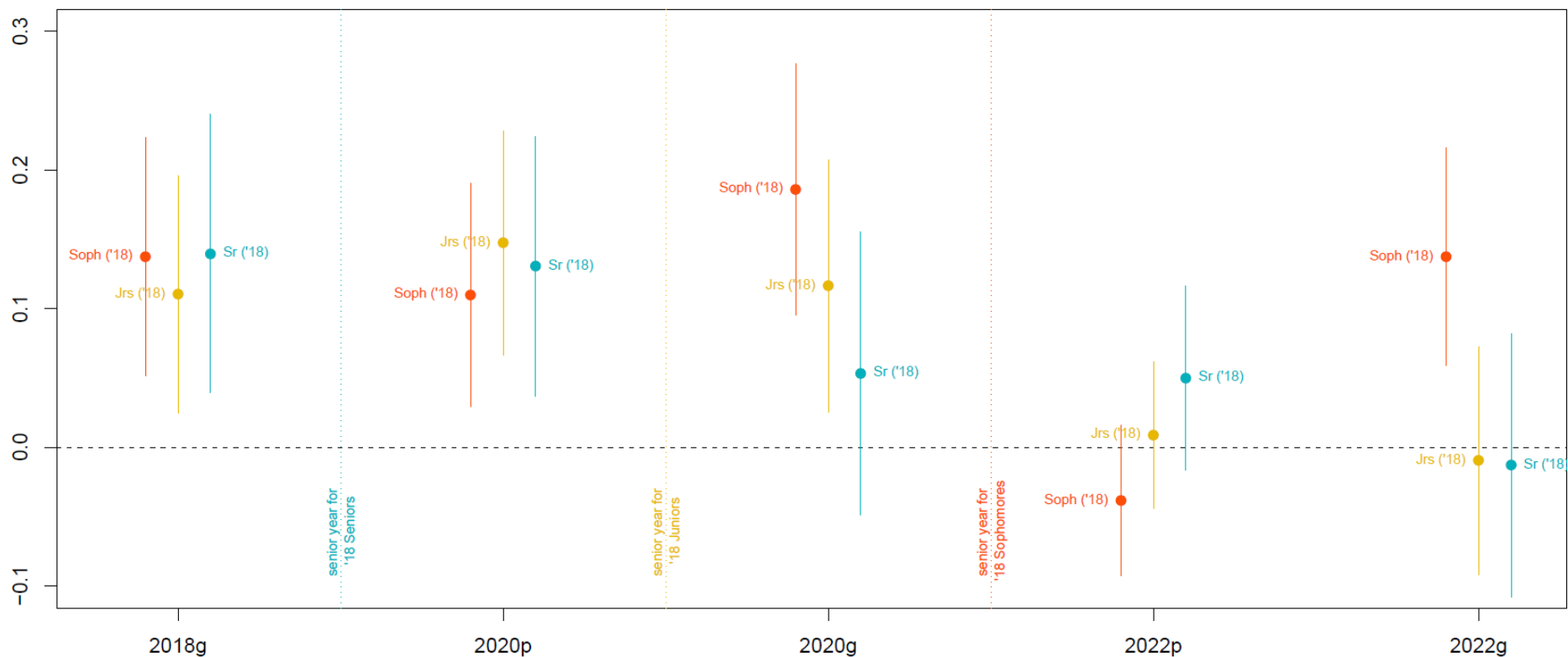


Fig. 3b. Average treatment effect of Ambassador treatment by 2018 grade-level.

Note: Average treatment effect of the Ambassador treatment for Sophomore (orange), Junior (yellow), and Senior (blue) 2018 grade-levels over five elections. Vertical lines mark when each cohort completed their senior year. Estimates are plotted with 95% confidence intervals.

5.3. Planning

We also hypothesized (H3) that making a plan to vote would help first time voters overcome the intimidation of executing a new task for the first time. In Experiment 1, within treatment group (NU Votes or Ambassador) half of the students were randomly selected to receive a planning prompt in their follow-up email.

To test for an effect of the planning treatment across all elections, we calculated a vote-propensity score for each individual as the proportion of elections in the dataset in which they cast a ballot. Figure 4 shows mean propensity score among Standard and Planning conditions for each treatment group, along with mean propensity score among students assigned to control, plotted with 95% confidence intervals.

We find no evidence that receiving an email prompt to make a plan increased turnout beyond the standard treatment conditions. Turnout in the 2018 midterms, the election for which the prompt specifically encouraged planning, showed no effect of the planning treatment in either the NU Votes or Ambassador treatments (see Appendix Table A.6).

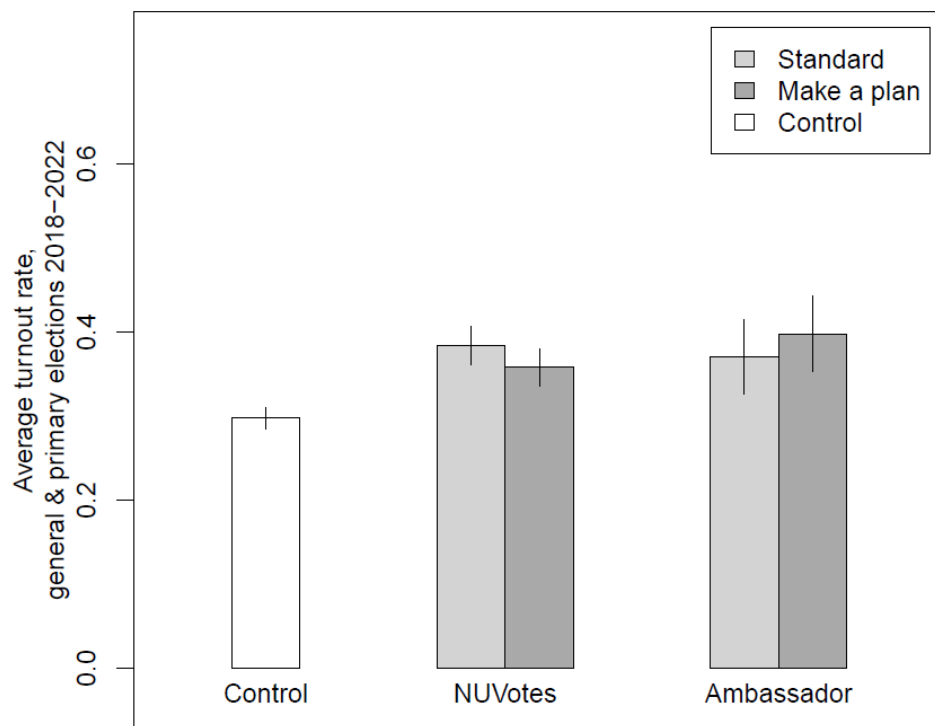


Fig. 4. Mean turnout propensity by planning condition.

Note: Average turnout propensity within experimental conditions. Turnout propensity is calculated as the proportion of elections in the dataset in which an individual cast a ballot (2018 general election, 2020 primaries, 2020 general, 2022 primaries, 2022 general). Error bars denote 95% confidence intervals.

6. Discussion

Given the habitual nature of turnout, orienting GOTV efforts around facilitating turnout for first time voters focuses efforts where they are likely to have the greatest impact. As Denny & Doyle (2009) note regarding efforts to increase electoral participation, “investments made in policies targeting young adults should yield the greatest return.” (p. 30). Our study takes the perspective of young citizens as novice voters who, facing this task for the first time, may not feel capable of adequately performing or even knowing all the steps necessary to casting a ballot.

We begin from the premise that, lacking personal experience with the process of casting a ballot, novice voters encounter a unique interaction of psychological and logistical barriers, such that the presence of *any* logistical obstacles can be sufficiently intimidating to serve as a barrier to turnout. Moreover, college students in particular often face additional barriers: they may have moved away from home, perhaps out-of-state, and may be on their own for the first time, grappling with a major life transition. Informed by research in learning sciences, we expect that novice voters need direct, timely, and actionable guidance in taking the steps required to vote. In short, we expect that, like anyone attempting a new procedure for the first time, new voters will benefit from some hand-holding through the process.

In Experiment 1, we found strong and lasting effects of the actionable-instruction treatments, intended to guide novice voters through the process of learning how to cast a ballot. These treatments, delivered in the run-up to the 2018 U.S. general elections, increased turnout in 2018, with treatment effects persisting through the 2020 primary and general elections.

To our surprise, personalization of the GOTV intervention showed little added benefit. Personalizing the actionable-instruction treatments by delivering them via a personal Voting Ambassador—a fellow student, typically from the same home state, assigned to personally aid the student through the turnout process—showed some indication of higher average treatment effects than actionable instruction delivered impersonally, though the difference was not generally significant. In Experiment 2, the highly personalized motivation-only treatments (i.e., Self-reminder, no actionable instruction) showed no sign of increasing turnout. However, this intervention was tested within a much smaller opt-in sample, a different population from Experiment 1.

Although the actionable-instruction treatment effects persisted through three election cycles (2018 general, 2020 primary, 2020 general), the treatment effects dropped off by 2022. An examination of treatment effects by graduating class shows no evidence that this drop-off results from moving to a new location after graduating. It may be that electoral context matters, such that the treatment effect has staying power through the upcoming presidential election, but fades with lower-salience midterm elections. Moreover, the political climate around these specific elections, including the impact of the Covid-19 pandemic on electoral processes during this period and broader trends in college student turnout, undoubtedly influence the results. With the limited data at hand, we can only speculate.

Thanks to a highly successful campus-wide program integrating voter registration into student orientation, we were able to test our treatments within a population where most of the students—roughly 75%—were already registered to vote. This first-stage voter registration process likely contributed to the efficacy of our treatments by establishing contact, simplifying the task required, and instilling a degree of commitment. Given the mandate for federally-funded colleges and universities to make a good-faith effort to distribute voter registration information to every student, many institutions may already be engaging in this process, setting the groundwork for efficacy of a low-cost student voter turnout initiative.

Green & Gerber (2024) write that a common theme emerges when examining what types of GOTV interventions have proven effective:

...the decision to vote is strongly shaped by one's social environment. One may be able to nudge turnout upward slightly by making voting more convenient, supplying voters with information, and reminding them about an imminent election; these effects, however, are small in comparison to what happens when voters are placed in a social milieu that urges their participation. That said, providing social inducements to vote is neither easy nor cheap. (2024, p. 169)

In combination with the findings from our study and others (e.g., Bennion & Nickerson, 2022; Bergan et al., 2022), this observation has important implications for the role of higher ed in fostering electoral participation. Within most college and university settings, providing social inducements to vote *is* both easy and cheap, at least relative to nearly all other contexts in everyday life. For many student bodies, the educational setting is also one's social environment, meaning that social inducements to vote are, to some degree, inherent to any institution-level voter turnout efforts. Colleges and universities are constituted to support student learning. No other institution is better situated to support young people in learning how to navigate a new process. And due to the habitual nature of voter turnout, by focusing on supporting novice voters, institutions of higher ed are uniquely positioned to set people up for a lifelong habit of turning out to vote. One aim of the orientation-based registration program developed by CCE is to create a social norm of voter participation for people who may be turning 18 as they begin college—an opportunity to say to incoming students: this is a place that values responsible civic engagement, a place where your eligible peers participate and vote.

While relying on institutions of higher education to increase voting among young people holds potential as a powerful means of reducing the age gap in turnout, it is important to note that, as with many efforts to reduce inequalities in participation, this approach would likely exacerbate participatory inequality along other dimensions. Education is already the single-most determinative demographic predictor of turnout (Wolfinger & Rosenstone, 1981; Lewis-Beck et al., 2008), with educational attainment exerting a profound causal effect on turnout (Sondheimer & Green, 2010). Increasing turnout among students enrolled in post-secondary education would only widen the already large gap in electoral participation between the “educational ‘haves’ and ‘have nots’” marked by those holding a college degree (Burden, 2009, p. 547).

Recognizing this potential to exacerbate participatory disparity by educational attainment is important, but it does not mean that institutions of higher education should forgo the opportunity to boost youth voter turnout. Some evidence suggests that the positive relationship between college education and turnout is strongest for students from lower socioeconomic backgrounds (Ahearn et al., 2023). And our finding that the low-cost provision of actionable instruction was just as beneficial as the resource-intensive personalization is especially important for institutions with tight resource constraints. Taken together, this suggests that institutions of higher ed like community colleges, which may be more likely to reach students who are from lower socioeconomic backgrounds or otherwise underrepresented in the electorate, could play a crucial role in reducing disparities in participation. But perhaps the most promising avenue would be to reach young potential voters before paths diverge for those who will attend post-secondary education and those who will not. Strategies developed within higher education to

cultivate a cultural norm of democratic engagement could potentially be adapted for high schools, faith spaces, or workplaces.

Addonizio (2012) developed and tested a First-Time Voter program, which provided in-school instruction on registration and voting to 18-year-old high school seniors. In a randomized controlled trial of the program, Addonizio found that the instruction increased turnout by 10 percentage points (Addonizio, 2012; Gerber & Green, 2024, p. 144). Fowler (2017) reports a two percentage-point increase in turnout associated with state laws that permit 16-year-olds to pre-register to vote. Such laws enable young people to fold voter registration into the process of obtaining their first driver's license—analogous to the “Ask Every Student” orientation-registration models in making use of an existing process that a high proportion of the youth population encounters. Importantly, Fowler finds evidence that pre-registration mobilizes youth who may not have otherwise registered (2017, p. 493). This suggests that an Ask Every Student-type of registration process aimed at high school students could be an important means of reducing inequalities in electoral participation.

Institutions of higher education should make use of their unique position to reach and support newly eligible potential voters. They can respond to The Higher Education Opportunity Act's call to facilitate registration by integrating the process into first-year orientation, and can provide low-cost support for student voter turnout by providing immediately actionable instruction on how to cast a ballot. As these efforts are pursued by institutions of higher education, further research should also take place into policies that would allow registration, and arguably voting (Oosterhoff et al., 2022), to take place at age 16—opening a space for timely instruction in electoral participation to reach students before disparate educational pathways diverge.

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