Methodological Appendix to "Developing empowered citizens: How universities help build efficacy"

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Appendix A: Question Wording and Descriptive Statistics

Dependent Variables

The following are statements some people make about government and politics. For each statement, please indicate whether you agree strongly, agree somewhat, neither agree nor disagree, disagree somewhat, or disagree strongly with the statement?

	Agree Strongly	Agree Somewhat	Neither Agree or Disagree	Disagree Somewhat	Disagree Strongly	Don't Know
"I think that I am better informed about politics and government than most people."	5	4	3	2	1	Missing
"My vote doesn't matter."	5	4	3	2	1	Missing

Treatment Variables

Since October 1, 2016 have you…?

	Yes	No	Don't Know
Taken a class on government, politics, or civics	1	0	Missing
Been encouraged by anyone to vote in the Presidential election	1	0	Missing

Matching Covariates

Political Science and Other Social Science Major

If you have declared a major(s), what is your area(s) of study? (check all that apply)

1: Arts
2: Architecture
3: Business
4: Education
5: Engineering
6: Humanities
7: Interdisciplinary
8: Math and Sciences
9: Nursing
10: Political Science
11: Social Sciences, other than Political Science
12: Social Work

13: Undeclared
14: Other _____

Sex

What is your sex?

1: Female
0: Male

Previous Voting Experience

Not including the 2016 primary and general elections, have you ever voted in a local, state, or national election?

1: Yes
0: No
Missing: Don't Know

Race and Ethnicity

What racial or ethnic group best describes you?

1: African-American
2: Asian-American
3: Hispanic
4: Caucasian
5: Native-American
6: Multiracial
7: Other _____

Internet News Readership, Blogs about Politics and Social Media Exposure Index Items

In a typical week, how often do you…

	Not at all				Very often	Don't know
Read news on the internet about politics	0	1	2	3	4	.
Read internet blogs about politics	0	1	2	3	4	.
Watch videos on the internet about politics	0	1	2	3	4	.
Read social media feeds about politics	0	1	2	3	4	.

Strong Partisan

Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?

0: Republican
1: Democrat
2: Independent
3: Other _____

If a respondent self-identified as a Republican, then s/he was asked:

Do you think of yourself as strongly Republican or not very strong?

1: Strong Republican
0: Not very strong Republican

If a respondent self-identified as a Democrat, then s/he was asked:

Do you think of yourself as strongly Democratic or not very strong?

1: Strong Democrat
0: Not very strong Democrat

Online Participation Index

If a respondent had a social media account, then s/he was asked the following questions.

During 2016, how often have you…

	Never				Frequently	Don't Know
Expressed your views about politics, a presidential candidate, a political party, another candidate for political office, or a political interest group on a website (e.g., in the comments section of a news story)?	0	1	2	3	4	.
Expressed your views about politics, a presidential candidate, a political party, another candidate for political office, or a political interest group on a blog?	0	1	2	3	4	.
Expressed your views about politics, a presidential candidate, a political party, another candidate for political office, or a political interest group on a social media platform (e.g., Facebook or Twitter)?	0	1	2	3	4	.

Shared an image or webpage related to politics, a presidential candidate, a political party, another candidate for political office, or a political interest group on a social media platform?	0	1	2	3	4	.

Parent Political Participation Indicators

How much do you agree or disagree with the following statements?

	Strongly disagree				Strongly agree	Don't Know
My parents/guardians vote regularly in elections.	0	1	2	3	4	.
My parents/guardians encourage me to express my opinions about politics even if they are different from their views	0	1	2	3	4	.
My parents/guardians discussed politics at home when I was growing up.	0	1	2	3	4	.

Peer Civic Engagement

How much do you agree or disagree with the following statements?

	Strongly disagree				Strongly agree	Don't Know
My friends are active in volunteer work in their community	0	1	2	3	4	.
My friends vote in elections	0	1	2	3	4	.
My friends encourage me to express my opinions about politics even if they are different from their views	0	1	2	3	4	.

Table A1: Summary Statistics for Variables

Variable	Number of Observations	Mean	Standard Deviation	Minimum	Maximum
Better Informed about Politics	452	3.66	1.16	1	5
Perception that One's Vote Does Not Matter	435	2.22	1.33	1	5
Taken a Class	914	.45	.50	0	1
Encouraged to Vote in the 2016 Election	476	.88	.32	0	1
Political Science Major	927	.05	.21	0	1
Other Social Science Major	927	.11	.32	0	1
Sex	932	.59	.49	0	1
Previous Voting Experience	925	.38	.49	0	1
Race and Ethnicity	929	3.75	1.07	1	7
Internet News Readership	913	2.47	1.27	0	4
Blog Readership	913	1.51	1.40	0	4
Social Media Exposure Index	908	4.50	2.36	0	8
Strong Partisan	930	.36	.48	0	1
Online Participation Index	878	4.31	4.34	0	16
Parents/Guardians Vote Regularly in Elections	913	3.26	1.08	0	4
Parents/Guardians Encourage Political Expression	909	2.76	1.18	0	4
Parents/Guardians Discussed Politics	912	2.49	1.27	0	4
Peer Civic Engagement	851	7.36	2.47	0	12

Appendix B: Matching Balance Statistics

Table B1: Balance Statistics for Better Informed about Politics

		Better Informed about Politics: Taken a Class						Better Informed about Politics: Encouraged to Vote					
Variable		Mean Treated	Mean Control	T-Test P-Value	K-S- Test P-Value	Var. Ratio (Tr/Co)	Mean eQQ Difference	Mean Treated	Mean Control	T-Test P-Value	K-S- Test P-Value	Var. Ratio (Tr/Co)	Mean eQQ Difference
Political Science Major	Before Matching	.148	.005	$1.187*10^{-6}$	N/A	25.778	.142	.063	.103	.443	N/A	.627	.026
	After Matching	.148	.099	.004	N/A	1.418	.049	.063	.093	.104	N/A	.700	.030
Sex	Before Matching	.574	.621	.369	N/A	1.040	.043	.613	.513	.248	N/A	.928	.103
	After Matching	.574	.627	.006	N/A	1.049	.056	.613	.574	.032	N/A	.970	.039
Race and Ethnicity	Before Matching	3.704	3.916	.032	.895	1.394	.198	3.826	3.692	.471	1.000	.682	.179
	After Matching	3.704	3.716	.638	1.000	1.148	.062	3.826	3.670	.031	.224	.636	.204
Previous Voting Experience	Before Matching	.549	.296	$8.953*10^{-7}$	N/A	1.191	.253	.405	.436	.721	N/A	.958	.026
	After Matching	.549	.506	.008	N/A	.990	.043	.405	.336	.016	N/A	1.080	.069
Internet News Readership	Before Matching	2.803	2.503	.017	.205	.784	.309	2.712	2.026	.003	.019	.807	.667
	After Matching	2.803	2.673	.093	.766	.953	.130	2.712	2.613	.006	.092	1.058	.141
Reading Blogs about Politics	Before Matching	1.735	1.296	.002	.021	1.143	.444	1.544	1.077	.033	.297	1.224	.462
	After Matching	1.735	1.586	.142	.917	1.021	.185	1.544	1.628	.259	.353	1.243	.198
Social Media Exposure Index	Before Matching	5.154	4.379	.001	.026	.820	.802	4.877	3.333	.0003	.008	.845	1.513
	After Matching	5.154	4.89	.010	.581	1.051	.346	4.877	4.670	.017	.522	1.046	.285
Online Participation index	Before Matching	5.204	3.611	.001	.030	1.453	1.636	4.420	3.667	.331	.512	.951	.795
	After Matching	5.204	4.327	.009	.169	1.359	.876	4.420	4.021	.046	.008	1.290	.850
Strong Partisanship	Before Matching	.370	.325	.369	N/A	1.064	.049	.360	.282	.318	N/A	1.112	.077
	After Matching	.370	.414	.089	N/A	.962	.043	.360	.366	.809	N/A	.993	.006
Other Social Science Major	Before Matching	.173	.084	.013	N/A	1.866	.093	.126	.077	.299	N/A	1.517	.051
	After Matching	.173	.148	.102	N/A	1.133	.025	.126	.066	.008	N/A	1.786	.060
Parents/Guardians Vote Regularly	Before Matching	3.272	3.335	.575	1.000	1.272	.074	3.324	3.231	.632	1.000	.807	.051
	After Matching	3.272	3.500	.023	.581	1.564	.228	3.324	3.402	.137	.522	1.560	.108
Parents/Guardians Encourage Political Expression	Before Matching	2.840	2.764	.536	.956	1.105	.111	2.832	2.462	.071	.459	.939	.333
	After Matching	2.840	3.006	.012	.766	1.232	.167	2.832	2.907	.101	.092	1.596	.201
Parents/Guardians Discussed Politics at Home	Before Matching	2.769	2.493	.161	.637	1.055	.222	2.628	2.180	.037	.321	1.038	.410
	After Matching	2.769	2.883	.009	.849	1.276	.204	2.628	2.502	.011	.010	1.509	.300
Peer Civic Engagement	Before Matching	7.506	7.562	.821	.820	.969	.241	7.619	6.513	.018	.056	.693	1.051
	After Matching	7.506	7.340	.254	.989	1.112	.241	7.619	7.351	.013	.051	.951	.363

Table B2: Balance Statistics for Perceptions that One's Vote Does Not Matter

		Perception that One's Vote Does Not Matter: Taken a Class						Perception that One's Vote Does Not Matter: Encouraged to Vote					
Variable		Mean Treated	Mean Control	T-Test P-Value	K-S- Test P-Value	Var. Ratio (Tr/Co)	Mean eQQ Difference	Mean Treated	Mean Control	T-Test P-Value	K-S- Test P-Value	Var. Ratio (Tr/Co)	Mean eQQ Difference
Political Science Major	Before Matching	.130	.005	$1.203*10^{-5}$	N/A	22.521	.123	.056	.079	.623	N/A	.711	.026
	After Matching	.130	.091	.014	N/A	1.367	.039	.056	.118	.003	N/A	.507	.062
Sex	Before Matching	.578	.616	.470	N/A	1.033	.032	.617	.474	.105	N/A	.926	.132
	After Matching	.578	.617	.014	N/A	1.032	.039	.617	.505	.002	N/A	.945	.112
Race and Ethnicity	Before Matching	3.708	3.904	.055	.929	1.328	.188	3.829	3.632	.314	.978	.633	.237
	After Matching	3.708	3.818	.058	.985	1.856	.175	3.829	3.614	.021	.022	.409	.433
Previous Voting Experience	Before Matching	.584	.293	$3.154*10^{-5}$	N/A	1.174	.292	.414	.474	.496	N/A	.951	.053
	After Matching	.584	.539	.019	N/A	.977	.045	.414	.458	.003	N/A	.978	.044
Internet News Readership	Before Matching	2.753	2.480	.034	.277	.785	.279	2.682	1.947	.002	.014	.778	.737
	After Matching	2.753	2.610	.098	.985	.866	.143	2.682	2.539	.001	.044	.969	.199
Reading Blogs about Politics	Before Matching	1.695	1.293	.006	.030	1.104	.409	1.533	.974	.011	.094	1.258	.579
	After Matching	1.695	1.643	.410	.902	1.129	.104	1.533	1.632	.169	.055	1.144	.112
Social Media Exposure Index	Before Matching	5.097	4.369	.002	.029	.827	.753	4.869	3.079	$6.812*10^{-5}$	.001	.818	1.763
	After Matching	5.097	4.838	.026	.738	1.070	.273	4.869	4.604	.003	.018	.935	.427
Online Participation index	Before Matching	5.026	3.647	.004	.085	1.460	1.416	4.352	3.632	.366	.272	.912	.763
	After Matching	5.026	4.071	.018	.192	1.394	.955	4.352	4.751	.159	.174	.881	.623
Strong Partisanship	Before Matching	.357	.318	.446	N/A	1.060	.039	.355	.237	.120	N/A	1.238	.132
	After Matching	.357	.409	.010	N/A	.950	.052	.355	.277	.006	N/A	1.143	.078
Other Social Science Major	Before Matching	.175	.086	.015	N/A	1.845	.091	.128	.078	.315	N/A	1.497	.053
	After Matching	.175	.143	.058	N/A	1.181	.032	.128	.097	.001	N/A	1.277	.031
Parents/Guardians Vote Regularly	Before Matching	3.279	3.323	.703	1.000	1.286	.084	3.330	3.158	.392	.944	.777	.132
	After Matching	3.279	3.416	.215	.985	1.271	.136	3.330	3.427	.053	.789	1.391	.134
Parents/Guardians Encourage Political Expression	Before Matching	2.851	2.727	.326	.669	1.125	.156	2.826	2.368	.025	.044	1.014	.447
	After Matching	2.851	3.039	.017	.643	1.195	.188	2.826	2.816	.849	.002	1.585	.252
Parents/Guardians Discussed Politics at Home	Before Matching	2.688	2.480	.127	.441	1.082	.247	2.620	2.211	.060	.350	1.055	.368
	After Matching	2.688	2.922	.039	.548	1.349	.234	2.620	2.664	.403	.498	1.436	.187
Peer Civic Engagement	Before Matching	7.442	7.520	.756	.908	1.004	.253	7.601	6.184	.003	.005	.765	1.395
	After Matching	7.442	7.507	.605	.902	1.407	.312	7.601	7.315	.018	.002	.877	.511

Appendix C: Robustness Checks for Better Informed Models

Table C0: Better Informed about Politics

	Taken a Class	Encouraged to Vote
Effect on Being Better Informed about Politics	.357	.098
Abadie-Imbens Standard Error	.184	.248
95% Confidence Interval Lower Bound	-.006	-.390
95% Confidence Interval Upper Bound	.720	.586
T-Statistic	1.945	.395
P-Value (Two-Tailed)	.052	.693
P-Value (One-Tailed)	.026	.347
N	162	333

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C1: Taking a Class on Government and Politics at a University and Being Better Informed about Politics while Removing Political Science Major, Sex, Race and Ethnicity, and Previous Voting Experience

	Political Science Major	Sex	Race and Ethnicity	Previous Voting Experience
Effect on Being Better Informed about Politics	.085	.429	.465	.527
Abadie-Imbens Standard Error	.141	.215	.212	.195
95% Confidence Interval Lower Bound	-.193	.005	.046	.142
95% Confidence Interval Upper Bound	.363	.853	.884	.912
T-Statistic	.600	1.998	2.191	2.708
P-Value (Two-Tailed)	.548	.046	.028	.007
P-Value (One-Tailed)	.274	.023	.014	.004
N	162	162	163	164

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C2: Taking a Class on Government and Politics at a University and Being Better Informed about Politics while Removing Internet News Readership, Blogs about Politics, Social Media Exposure Index, and Online Participation Index

	Internet News Readership	Blogs about Politics	Social Media Exposure Index	Online Participation Index
Effect on Being Better Informed about Politics	.334	.374	.474	.403
Abadie-Imbens Standard Error	.184	.210	.188	.202
95% Confidence Interval Lower Bound	-.029	-.041	.103	.004
95% Confidence Interval Upper Bound	.697	.789	.845	.802
T-Statistic	1.821	1.783	2.525	1.996
P-Value (Two-Tailed)	.069	.075	.012	.046
P-Value (One-Tailed)	.035	.038	.006	.023
N	162	163	164	171

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C3: Taking a Class on Government and Politics at a University and Being Better Informed about Politics while Removing Strong Partisanship, Other Social Science Major, Parents/Guardians Vote Regularly in Elections and Parents/Guardians Encourage Political Expression

	Strong Partisanship	Other Social Science Major	Parents/Guardians Vote Regularly in Elections	Parents/Guardians Encourage Political Expression
Effect on Being Better Informed about Politics	.350	.405	.473	.623
Abadie-Imbens Standard Error	.187	.193	.191	.205
95% Confidence Interval Lower Bound	-.019	.024	.096	.218
95% Confidence Interval Upper Bound	.719	.786	.850	1.028
T-Statistic	1.874	2.106	2.473	3.033
P-Value (Two-Tailed)	.061	.035	.013	.002
P-Value (One-Tailed)	.031	.018	.007	.001
N	162	162	162	162

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C4: Taking a Class on Government and Politics at a University and Being Better Informed about Politics while Removing Parents/Guardians Discussed Politics at Home and Peer Civic Engagement

	Parents/Guardians Discussed Politics at Home	Peer Civic Engagement
Effect on Being Better Informed about Politics	.423	.202
Abadie-Imbens Standard Error	.209	.168
95% Confidence Interval Lower Bound	.010	-.130
95% Confidence Interval Upper Bound	.836	.534
T-Statistic	2.024	1.205
P-Value (Two-Tailed)	.043	.228
P-Value (One-Tailed)	.022	.114
N	162	172

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C5: Encouraged to Vote in the 2016 Election and Being Better Informed about Politics while Removing Political Science Major, Sex, Race and Ethnicity, and Previous Voting Experience

	Political Science Major	Sex	Race and Ethnicity	Previous Voting Experience
Effect on Being Better Informed about Politics	.122	.106	-.069	.148
Abadie-Imbens Standard Error	.245	.272	.268	.258
95% Confidence Interval Lower Bound	-.360	-.429	-.596	-.357
95% Confidence Interval Upper Bound	.604	.641	.458	.655
T-Statistic	.499	.391	-.259	.574
P-Value (Two-Tailed)	.618	.696	.796	.566
P-Value (One-Tailed)	.309	.348	.398	.283
N	333	333	335	336

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C6: Encouraged to Vote in the 2016 Election and Being Better Informed about Politics while Removing Internet News Readership, Blogs about Politics, Social Media Exposure Index, and Online Participation Index

	Internet News Readership	Blogs about Politics	Social Media Exposure Index	Online Participation Index
Effect on Being Better Informed about Politics	.224	.140	.234	.173
Abadie-Imbens Standard Error	.261	.255	.205	.247
95% Confidence Interval Lower Bound	-.289	-.362	-.169	-.313
95% Confidence Interval Upper Bound	.737	.642	.637	.659
T-Statistic	.859	.550	1.141	.700
P-Value (Two-Tailed)	.390	.583	.254	.484
P-Value (One-Tailed)	.195	.292	.127	.242
N	333	335	337	350

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C7: Encouraged to Vote in the 2016 Election and Being Better Informed about Politics while Removing Strong Partisanship, Other Social Science Major, Parents/Guardians Vote Regularly in Elections and Parents/Guardians Encourage Political Expression

	Strong Partisanship	Other Social Science Major	Parents/Guardians Vote Regularly in Elections	Parents/Guardians Encourage Political Expression
Effect on Being Better Informed about Politics	.104	.204	.156	.303
Abadie-Imbens Standard Error	.241	.269	.233	.219
95% Confidence Interval Lower Bound	-.370	-.325	-.302	-.128
95% Confidence Interval Upper Bound	.578	.733	.614	.734
T-Statistic	.431	.760	.668	1.381
P-Value (Two-Tailed)	.666	.447	.504	.167
P-Value (One-Tailed)	.333	.224	.252	.084
N	333	333	334	335

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table C8: Encouraged to Vote in the 2016 Election and Being Better Informed about Politics while Removing Parents/Guardians Discussed Politics at Home and Peer Civic Engagement

	Parents/Guardians Discussed Politics at Home	Peer Civic Engagement
Effect on Being Better Informed about Politics	.285	.061
Abadie-Imbens Standard Error	.292	.260
95% Confidence Interval Lower Bound	-.289	-.450
95% Confidence Interval Upper Bound	.859	.572
T-Statistic	.976	.234
P-Value (Two-Tailed)	.329	.815
P-Value (One-Tailed)	.165	.408
N	334	356

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Appendix D: Robustness Checks for Vote Doesn't Matter Models (Encouraged to Vote in the 2016 Election)

Table D0: Perception that One's Vote Does Not Matter

	Taken a Class	Encouraged to Vote in the 2016 Election
Effect on Perception that One's Vote Doesn't Matter	-.301	-.700
Abadie-Imbens Standard Error	.225	.395
95% Confidence Interval Lower Bound	-.746	-1.477
95% Confidence Interval Upper Bound	.144	.077
T-Statistic	-1.339	-1.769
P-Value (Two-Tailed)	.181	.077
P-Value (One-Tailed)	.091	.039
N	154	321

Notes: In this table, those who either took a class on government and politics at a university, were encouraged to vote in the 2016 election, or were encouraged to vote in the 2016 election by social media are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D1: Taking a Class on Government and Politics at a University and Perception that One's Vote Does Not Matter while Removing Political Science Major, Sex, Race and Ethnicity, and Previous Voting Experience

	Political Science Major	Sex	Race and Ethnicity	Previous Voting Experience
Effect on Perception that One's Vote Doesn't Matter	-.048	-.377	-.230	-.064
Abadie-Imbens Standard Error	.197	.216	.214	.207
95% Confidence Interval Lower Bound	-.437	-.803	-.653	-.473
95% Confidence Interval Upper Bound	.341	.050	.193	.345
T-Statistic	-.262	-1.749	-1.075	-.309
P-Value (Two-Tailed)	.809	.080	.282	.757
P-Value (One-Tailed)	.405	.040	.141	.379
N	154	154	155	156

Notes: In this table, those who took a class on government and politics at a university are compared with those who did not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D2: Taking a Class on Government and Politics at a University and Perception that One's Vote Does Not Matter while Removing Internet News Readership, Blogs about Politics, Social Media Exposure Index, and Online Participation Index

	Internet News Readership	Blogs about Politics	Social Media Exposure Index	Online Participation Index
Effect on Perception that One's Vote Doesn't Matter	-.382	-.220	-.300	-.070
Abadie-Imbens Standard Error	.226	.218	.220	.222
95% Confidence Interval Lower Bound	-.829	-.651	-.735	-.508
95% Confidence Interval Upper Bound	.065	.211	.135	.368
T-Statistic	-1.691	-1.007	-1.366	-.314
P-Value (Two-Tailed)	.091	.314	.172	.754
P-Value (One-Tailed)	.046	.157	.086	.377
N	154	155	156	162

Notes: In this table, those who took a class on government and politics at a university are compared with those who did not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D3: Taking a Class on Government and Politics at a University and Perception that One's Vote Does Not Matter while Removing Strong Partisanship, Other Social Science Major, Parents/Guardians Vote Regularly in Elections and Parents/Guardians Encourage Political Expression

	Strong Partisanship	Other Social Science Major	Parents/Guardians Vote Regularly in Elections	Parents/Guardians Encourage Political Expression
Effect on Perception that One's Vote Doesn't Matter	-.238	-.144	-.172	-.328
Abadie-Imbens Standard Error	.219	.213	.215	.220
95% Confidence Interval Lower Bound	-.670	-.565	-.597	-.763
95% Confidence Interval Upper Bound	.195	.277	.253	.107
T-Statistic	-1.089	-.679	-.803	-1.489
P-Value (Two-Tailed)	.276	.496	.422	.136
P-Value (One-Tailed)	.138	.248	.211	.068
N	154	154	154	154

Notes: In this table, those who took a class on government and politics at a university are compared with those who did not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D4: Taking a Class on Government and Politics at a University and Perception that One's Vote Does Not Matter while Removing Parents/Guardians Discussed Politics at Home and Peer Civic Engagement

	Parents/Guardians Discussed Politics at Home	Peer Civic Engagement
Effect on Perception that One's Vote Doesn't Matter	-.235	.011
Abadie-Imbens Standard Error	.227	.188
95% Confidence Interval Lower Bound	-.684	-.360
95% Confidence Interval Upper Bound	.214	.382
T-Statistic	-1.038	.058
P-Value (Two-Tailed)	.299	.954
P-Value (One-Tailed)	.150	.477
N	154	163

Notes: In this table, those who took a class on government and politics at a university are compared with those who did not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D5: Encouraged to Vote in the 2016 Election and Perception that One's Vote Does Not Matter while Removing Political Science Major, Sex, Race and Ethnicity, and Previous Voting Experience

	Political Science Major	Sex	Race and Ethnicity	Previous Voting Experience
Effect on Perception that One's Vote Doesn't Matter	-.709	-.733	-.626	-.787
Abadie-Imbens Standard Error	.375	.374	.312	.392
95% Confidence Interval Lower Bound	-1.447	-1.469	-1.240	-1.558
95% Confidence Interval Upper Bound	.029	.003	-.012	-.016
T-Statistic	-1.893	-1.958	-2.006	-2.008
P-Value (Two-Tailed)	.058	.050	.045	.045
P-Value (One-Tailed)	.029	.025	.023	.023
N	321	321	323	324

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D6: Encouraged to Vote in the 2016 Election and Perception that One's Vote Does Not Matter while Removing Internet News Readership, Blogs about Politics, Social Media Exposure Index, and Online Participation Index

	Internet News Readership	Blogs about Politics	Social Media Exposure Index	Online Participation Index
Effect on Perception that One's Vote Doesn't Matter	-.694	-.685	-.864	-.707
Abadie-Imbens Standard Error	.364	.358	.379	.364
95% Confidence Interval Lower Bound	-1.410	-1.389	-1.609	-1.423
95% Confidence Interval Upper Bound	.022	.019	-.119	.009
T-Statistic	-1.907	-1.913	-2.279	-1.940
P-Value (Two-Tailed)	.056	.056	.023	.052
P-Value (One-Tailed)	.028	.028	.012	.026
N	321	323	325	337

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D7: Encouraged to Vote in the 2016 Election and Perception that One's Vote Does Not Matter while Removing Strong Partisanship, Other Social Science Major, Parents/Guardians Vote Regularly in Elections and Parents/Guardians Encourage Political Expression

	Strong Partisanship	Other Social Science Major	Parents/Guardians Vote Regularly in Elections	Parents/Guardians Encourage Political Expression
Effect on Perception that One's Vote Doesn't Matter	-.604	-.611	-.821	-.650
Abadie-Imbens Standard Error	.368	.382	.381	.414
95% Confidence Interval Lower Bound	-1.328	-1.362	-1.570	-1.464
95% Confidence Interval Upper Bound	.120	.140	-.072	.164
T-Statistic	-1.642	-1.597	-2.156	-1.572
P-Value (Two-Tailed)	.101	.110	.031	.116
P-Value (One-Tailed)	.051	.055	.016	.058
N	321	321	322	323

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table D8: Encouraged to Vote in the 2016 Election and Perception that One's Vote Does Not Matter while Removing Parents/Guardians Discussed Politics at Home and Peer Civic Engagement

	Parents/Guardians Discussed Politics at Home	Peer Civic Engagement
Effect on Perception that One's Vote Doesn't Matter	-.549	-.379
Abadie-Imbens Standard Error	.399	.324
95% Confidence Interval Lower Bound	-1.334	-1.016
95% Confidence Interval Upper Bound	.236	.258
T-Statistic	-1.375	-1.169
P-Value (Two-Tailed)	.169	.242
P-Value (One-Tailed)	.085	.121
N	321	343

Notes: In this table, those who were encouraged to vote in the 2016 election are compared with those who were not. Second, the covariates on which the matching is based are described in the text. Third, the effects on the perception that one's vote does not matter are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Appendix E: Reverse Causality Checks

Table E1: Being Better Informed about Politics and Taking a Class on Government and Politics at a University

	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Effect on Taking a Class on Government, Politics, or Civics	.703	.496	.350	1.074
Abadie-Imbens Standard Error	.536	.177	.247	.488
95% Confidence Interval Lower Bound	-.396	.144	-.139	.105
95% Confidence Interval Upper Bound	1.802	.848	.839	2.043
T-Statistic	1.310	2.801	1.417	2.199
P-Value (Two-Tailed)	.190	.005	.156	.028
P-Value (One-Tailed)	.095	.003	.078	.014
N	28	88	128	95

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table E2: Being Better Informed about Politics and Encouraged by Anyone to Vote in the 2016 Presidential Election

	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Effect on Encouraged by Anyone to Vote in the 2016 Election	.809	.631	-.031	.216
Abadie-Imbens Standard Error	.384	.287	.159	.381
95% Confidence Interval Lower Bound	.021	.061	-.346	-.540
95% Confidence Interval Upper Bound	1.597	1.201	.284	.972
T-Statistic	2.107	2.200	-.194	.566
P-Value (Two-Tailed)	.035	.028	.846	.571
P-Value (One-Tailed)	.018	.014	.423	.286
N	28	92	130	96

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table E3: Perception that Vote Does Not Matter and Taking a Class on Government and Politics at a University

	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Effect on Taking a Class on Government, Politics, or Civics	-.009	-.042	-.077	.127
Abadie-Imbens Standard Error	.085	.124	.103	.121
95% Confidence Interval Lower Bound	-.184	-.291	-.284	-.125
95% Confidence Interval Upper Bound	.166	.207	.130	.379
T-Statistic	-.109	-.336	-.752	1.046
P-Value (Two-Tailed)	.913	.737	.452	.296
P-Value (One-Tailed)	.457	.369	.226	.148
N	77	52	49	22

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.

Table E4: Perception that Vote Does Not Matter and Encouraged by Anyone to Vote in the 2016 Presidential Election

	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Effect on Encouraged by Anyone to Vote in the 2016 Election	-.004	-.186	.045	-.120
Abadie-Imbens Standard Error	.060	.060	.057	.122
95% Confidence Interval Lower Bound	-.123	-.306	-.069	-.374
95% Confidence Interval Upper Bound	.115	-.066	.159	.134
T-Statistic	-.074	-3.093	.792	-.981
P-Value (Two-Tailed)	.941	.002	.429	.327
P-Value (One-Tailed)	.471	.001	.215	.164
N	78	53	51	22

Notes: In this table, those who have taken a class on government and politics at a university are compared with those who have not. Second, the covariates on which the matching is based are described in the text. Third, the effects on being better informed about politics are the average treatment effect for the treated (ATET). Finally, the matching results are from 1:1 genetic matching with post-matching bias adjustment. Thus, the N represents the matched number of observations.