

Analyzing the Effects of Election Lab on the Relationship Between High School Civics Knowledge and Perspectives Towards Civic Engagement

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ABSTRACT

A lack of civic awareness and engagement in the United States can be drawn back to a lack of civic education in many public schools in America. In order for a government “of the people, by the people, [and] for the people” (Lincoln, 1863) to function effectively, it is imperative that the future generations of Americans are knowledgeable of government processes by which change can be made; the most notable method of civic engagement is participating in elections.

The game Election Lab developed by the company Indelible Learning Inc. is a presidential election simulation game in which players are given the responsibilities of campaign managers to strategically allocate resources such as time, people, and money in order to win over swing states, and thus the election. Election Lab simulates real-life presidential elections, and exemplifies the uncertainty that comes with campaigning over swing states. Additionally, Election Lab provides students with increased knowledge (supported by the data found in this study) on a key civic process: the Electoral College. This study utilizes Election Lab in a classroom setting to study its effects on high school seniors’ civic knowledge and attitudes toward their own civic engagement.

The findings of this research study have important implications on the future of civic education in schools across the country, and provide that with increased civic education, youth will become more civically knowledgeable and thus aware.

INTRODUCTION

The civic participation and active

engagement of young individuals in America is what will determine the political landscape of the country for the following generations. The rate at which young voter apathy continues to grow in the United States presents an alarming concern for the future of the nation. Although an improvement since the establishment of the 26th Amendment, which solidifies suffrage for citizens of 18 years of age, less than half of newly eligible voters participated in the 2020 presidential election (Center for Information & Research on Civic Learning and Engagement, Tufts University, 2021). Civics education and lessons on the electoral process are an important step in preparing young generations for political participation, thus fostering a productive and informed democracy.

As the polarization of American society continues to become more extreme (DeSilver, 2014), the need for youth populations to be informed about governmental processes is crucial to having a democracy that is “...of the people, by the people, for the people...” (Lincoln, 1863). However, studies conducted at think tanks such as Pew Research Center have produced concerning data showing low levels of civic participation and engagement due to little civic education in schools. Perhaps one of the most crucial governmental processes for youth to be educated on is the Electoral College and voting processes in the United States. Nevertheless, such processes are among the most difficult and complex to understand.

Educational games such as Election Lab, in which students play the role of a campaign strategist of a presidential election, can be used as an effective form of educating the youth population on the workings of governmental processes and encouraging civic engagement.

Identifying the Gap

The pre-existing research identifies the low civic and democratic goals in the Local Control and Accountability Plans (LCAP) of California school districts (Hodgin, Alkam, Conde, Kahne, 2023), highlights the importance of the election turnout of newly eligible voters across the country, and examines the effect of electoral laws and policies on young voter turnout (Center for Information & Research on Civic Learning and Engagement, 2021). However, the pre-existing research glazes over the happenings and methods of in-classroom teachings of civic engagement, and fails to take into account key factors which have the potential to affect a newly eligible voter's political participation, such as differing levels and types of government classes.

With the timeliness of the upcoming 2024 presidential election, this research aims to analyze the effects of playing a presidential election simulation game on a high school senior's knowledge and perspective of the electoral college in the United States, focusing on the game's effect on the knowledge and perspective of students (i.e. likelihood to vote in the upcoming presidential election) on the voting system and civic engagement. This research study is also the first to pilot the online version of the Election Lab game - which also comes in a physical board game form - developed by the company Indelible Learning Inc. in a high school classroom setting.

LITERATURE REVIEW

Source Search Methods

The various sources and literature found were discovered through multiple databases via the school library and the internet. Some keywords used in my research were: civic engagement, youth, Electoral College, high school, voting, and civic education.

The Necessity of Civic Education in Schools in the 21st Century

Having civically conscious and engaged citizens is essential to maintaining a functional democracy run by the people. However, multiple studies conducted through various methods gathered findings that express low levels of civic participation and knowledge, specifically among youth

populations.

There exists clear evidence of limited civic knowledge among the American public, as is obvious in a 2016 survey conducted by the Annenberg Public Policy Center of the University of Pennsylvania. According to the survey, only a quarter of American citizens could name the three branches of government, and nearly a third could not name any of the branches at all (APPC, 2016). This clear lack of civic knowledge is a cause for concern, and calls for an "increased focus on civics education in the schools," as stated by Annenberg Public Policy Center director Kathleen Hall Jamieson, PhD.

In addition to an overall lack of civic knowledge, studies have shown trends in decreasing civic engagement, more specifically in the youth voting population. Conducted at the Center for Information & Research on Civic Learning and Engagement (CIRCLE) at Tufts University's Tisch College of Civic Life, a study culminated voter file data from across forty states to examine the turnout of eligible youth voters who participated in midterm elections within the last ten years. The study found that the national youth voter turnout (youth voter defined as being between the ages 18-29) in the 2022 midterm elections was approximately 23%, a 5% drop from the 2018 midterm elections (CIRCLE, 2023). However, the overall national youth voter turnout has seen a steady increase since 2014, in which only 13% of eligible youth voters participated in midterm elections (CIRCLE, 2023). Still, this data does not diminish the fact that only a small percentage of eligible youth voters actually participate in national elections. Such little participation and knowledge of voting systems and other governmental processes in the U.S. can be attributed to limited civic education in schools.

Low Civic and Democratic Agendas in American Schools

There are many factors that contribute to the decreasing civic knowledge and participation in the U.S., including but not limited to the lessening trust in the government due to bipartisan polarization (Pew Research Center, 2023) or racial barriers (Kawashima-Ginsberg, CIRCLE, 2023). However, one factor that largely contributes to the knowledge of and thus engagement in governmental processes is

civic education.

A research study conducted at the University of California, Riverside found that there is a significant need for California schools to progress in supporting civic education through various methods. Researchers concluded that civic education is greatly marginalized in many California school districts' Local Control and Accountability Plans (LCAPs), with only 13% of all districts referencing "civics", "citizens", "citizenship", or "democracy" in these LCAPs (Hodgin, Alkam, Conde, Kahne, 2023). Such low commitments to civic education are not just an issue in the state of California, however.

A 2018 report by the Brown Center on American Education found that nationwide civics performance was significantly lower than student performance in subjects such as mathematics and english. The report examined the scores of the National Assessment of Educational Progress (NAEP), often called the Nation's Report Card, across various academic disciplines, including civics. While NAEP scores in reading and math continue to increase, scores of civics knowledge see no significant difference (Hansen, Levesque, Valant, Quintero, 2018). Based on these studies, it is clear that there is a lack of emphasis and equal distribution of quality civics education in schools. In a research report conducted at Brigham Young University, a link between inequitable civic education in public schools and low civic engagement was found. The lack of civic education in many public schools has the consequence of leading to "...inconsistencies in how much students know about political life across the country," and the development of knowledge gaps (Ward, Mortensen, 2022). However, research studies having to do with civic education and engagement are not all worrisome.

Increased Civic Engagement as a Result of Civics Education

Although pre-existing research has yielded concerning data regarding the low civic knowledge and engagement of America's youth population, research that shows the direct relationship between civic education and participation provides a sense of hope for the future. A research study

conducted at Tufts University's CIRCLE shows that a clear correlation exists between high school civic education and encouragement and the likelihood of being civically engaged later in life. The study surveyed a diverse group of 2,232 eligible voters (ages 18-29) from May to June of 2020 when the 2020 General Election was approaching. Perhaps the aspect of civic engagement that comes with the most weight is participating in an election, whether it is through voting, working on a political campaign, or a variety of other methods.

The percentage of participants of the survey that volunteered on a political campaign who were taught about voter registration in high school was significantly higher than fellow participants who simply received encouragement to vote in high school or received none at all (CIRCLE, 2020). Additionally, the study's participants were able to recall more information about the upcoming election if they were encouraged and taught how to vote in high school. Such information included knowing whether or not their state had online voter registration available or obtaining details of how to vote by mail or an absentee ballot (CIRCLE, 2020). The results of the 2020 survey also showed a difference in perspective on the potential impact and outcomes of the election between participants who received different ways of learning about voting and voter registration. 84% of participants who received both encouragement and directions on registering to vote agreed that the outcomes of the 2020 election would make a significant impact on their community, while approximately 71% who were taught about but not encouraged to vote agreed with the statement (CIRCLE, 2020). Although a seemingly trivial difference, the data yielded from the survey showed the impact of a more encompassing approach to integrating civic education into schools, through both encouraging engagement and teaching the technicalities of governmental processes.

Summary

Extensive studies have concluded similar findings: there is a limited extent to which civics education is taught in schools, impacting the civic knowledge and engagement of the American public. The findings of these studies show a strong correlation between civic education and engagement; with increased

teachings of civics in schools, the participation of the public in political processes can help maintain a functioning democracy.

Despite the abundance of research conducted on civics education, civic engagement, and the relationship between the two, an important aspect of the area is still to be examined. Because the methodology of many previous research studies mostly included surveys and examinations of important documents, such as Local Control and Accountability Plans (LCAPs) as mentioned in the study conducted at the University of California Riverside (Hodgin, Alkam, Conde, Kahne, 2023), I had a difficult time finding a research study that examined first-hand and measured the effects of civic education on civic knowledge and engagement. Thus, utilizing Election Lab in a classroom setting would allow me to do this.

Connecting the findings yielded from preexisting studies, this research project piloted the game, Election Lab Online, in a high school classroom setting to analyze its effects on the knowledge and perspective of nearly and newly eligible voters on the Electoral College and voting systems in the U.S. The question I will be addressing in this study is: to what extent does playing Election Lab affect a high school senior's knowledge and perspective of the Electoral College and voting system in the United States?

RESEARCH DESIGN AND METHODOLOGY Study Design

Perhaps the most notable form of civic participation that comes to mind is voting - more specifically, in presidential elections. This study examines the knowledge high school government students have on the Electoral College and voting processes in the United States, as well as their attitudes towards their likelihood of participating in the upcoming 2024 presidential election. This study aims to raise awareness of the impact of in-classroom civic education on youth civic knowledge and attitudes towards one's own civic engagement. The outcomes of this study will also provide insights into the potential benefits of Election Lab Online and other creative forms of civic education in the future.

This study was grouped into three major

parts. In the first part of the study, participants were asked to complete a survey with questions regarding their knowledge and perspectives of the Electoral College and voting system in the United States. The second part of the study encompassed a comprehensive in-classroom session of participants playing the game, Election Lab Online. As the third and final part of the study, participants were asked to complete a survey with questions regarding their changed or unchanged knowledge and perspectives on the Electoral College and voting system after participating in an Election Lab session.

Contacting People for the Study

Previous to conducting my research study, I briefly interned for the company Indelible Learning; as I decided on using Election Lab as a tool to measure the effects of youth civic education on youth civic engagement, I reached out to the CEOs of the company, Dr. Jasminka Criley, MD and Stuart Criley, MBA, who are also two of the co-creators of Election Lab. They helped mentor me through my research process by teaching me how to best navigate Election Lab to facilitate it in a classroom setting. The next step I took towards conducting my research project was finding a group of participants who were willing to play Election Lab for the purpose of my study. In order to access as many students enrolled in civics-related classes, all teachers at my school who teach government classes were contacted directly and informed of the purpose and direction of this research study. These teachers agreed to allow me to use their classes for the purpose of my study.

Study Participants

The participants of this study were high school seniors in all levels and types of government classes that were available at my school. Levels and types of government classes included: United States Government (71.7%), AP United States Government and Politics (22.6%), and AP Comparative Government (5.7%). I chose to select high school seniors - with an average age of 18 years old - as the demographic for my study as the majority of participants will be able to vote in the upcoming 2024 presidential election. Additionally, I decided to have the participants of this study be currently enrolled in various levels and types of government

classes as this demographic would be most effective in analyzing the existing degrees to which civics are currently being taught in high schools.

Approximately 106 government students participated in this study; 67% identified as male, 29% identified as female, and 4% identified with another gender identity. Due to the geographical location of the study participants, the racial demographic of the study participants was a majority caucasian at about 76%. To ensure this study met ethical standards, participants only took part in the study if they did so voluntarily and completed a consent and parental permission form beforehand.

Survey Questionnaire

I designed two survey questionnaires that were completed by the participants of this study. The first was filled out by participants before they played Election Lab and the second was filled out by participants after they played Election Lab. Many of the questions asked on each of the surveys were designed to align with information accessible when playing Election Lab to adequately test the effects of the game. Both surveys asked the study participants to answer questions on key information about the Electoral College, such as the number of electoral votes needed to win the 2024 presidential election or the definition of a swing state. The "Post-Election Lab" survey differed slightly as it asked study participants additional questions in regards to the takeaways learned or not learned after playing the game, in addition to questions asking about aspects of the gameplay itself. Study participants were not given a time limit when filling out the surveys, as it was encouraged that participants took the necessary time to answer each question as truthfully and honestly as possible. To ensure participants did not search up answers on the internet, the completion of the surveys were closely proctored and supervised. Each of these surveys successfully underwent the process of being approved by my school's administration and the AP Capstone Institutional Review Board.

Election Lab Online by Indelible Learning Inc.

The approach of this particular research study is unique in that it works directly with government students while piloting the game Election Lab Online (ELO) in a high school classroom setting. After study participants completed the first survey questionnaire, "Pre-Election Lab", a game of Election Lab Online was conducted in the government classrooms of participants. In total, I facilitated six in-classroom sessions of Election Lab Online with a total of 106 study participants who played the game.

The game Election Lab was developed by Indelible Learning Inc., a company that develops innovative educational games for health, science, and civics. Election Lab takes away from the bipartisan bias of campaigns by using realistic statistics and data to simulate an election. By doing so, players of the game can learn about the Electoral College and presidential election process without political bias that may hinder on having a well-rounded learning experience. While the original board game version of Election Lab has been used in many local educational institutions, the version that the subjects of my study played is the new Election Lab Online with the most updated 2024 electoral college map, making this study the first to pilot this specific version of the game in a high school class setting.

Playing Election Lab Online

To fully understand the purpose of this research study, it is important to know how a game of *Election Lab Online* is conducted. For the purpose of this study, the 2024 edition of *Election Lab Online* was played to enhance the realness of the elections of the game (Figure 1). In *Election Lab Online*, players are given the responsibilities of a campaign strategist weeks before the next presidential election. The main objective of the game is that of a presidential election: to reach 270 electoral votes to become President of the United States. To do so, the key to a player's success is winning crucial swing states. The responsibility of the player is to decide which swing states to allocate resources to in order to strategically win the election.

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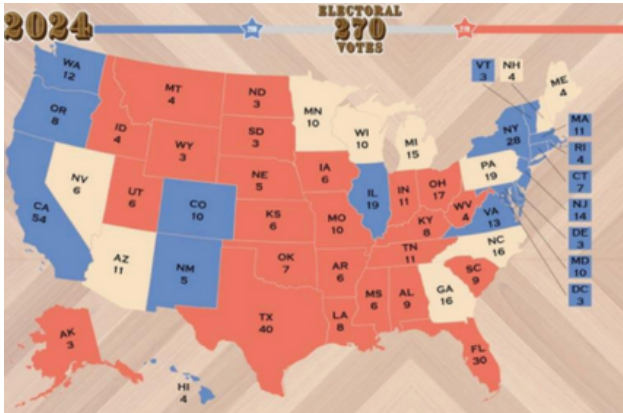


Figure 1 Election Lab Online, 2024 game board
Note: The beginning number of electoral votes for Blue is 208 and for Red is 219. These are the current number of electoral votes already secured from non-swing states for Blue and Red respectively.

Election Lab Online is a two player game, where each player is assigned either to be a campaign strategist for “Red” or “Blue” (the terms “Republican” and “Democrat” are not used in the play of this game for the purpose of learning about the process, not the politics). After being assigned “Red” or “Blue”, players are presented with a fixed amount of 24 tokens representing campaign resources (Figure 2) that they will then deploy to swing states. These campaign resource tokens are representative of the time, people, and money that campaign managers must strategically utilize during the time leading up to a presidential election. Players must choose how many resource tokens to allocate to each swing state, and are able to deploy up to a maximum of five tokens to allocate to a single swing state (Figure 2b). The extent to which care and strategy is put into the thought process of deploying campaign resources is up to the player. When participants deployed the campaign resource tokens, I instructed them to do so without the assistance of a teacher or fellow classmate, with the goal to yield measurable, authentic data. Once a player enters their chosen allocation of resources, they are not able to change these allocations.

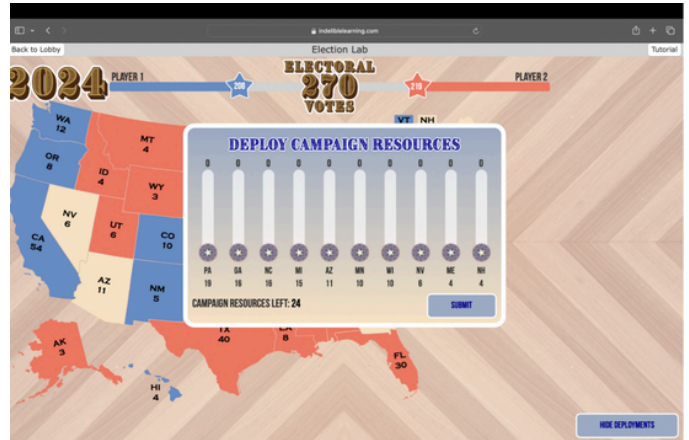


Figure 2a Given campaign resources for the “Blue” player

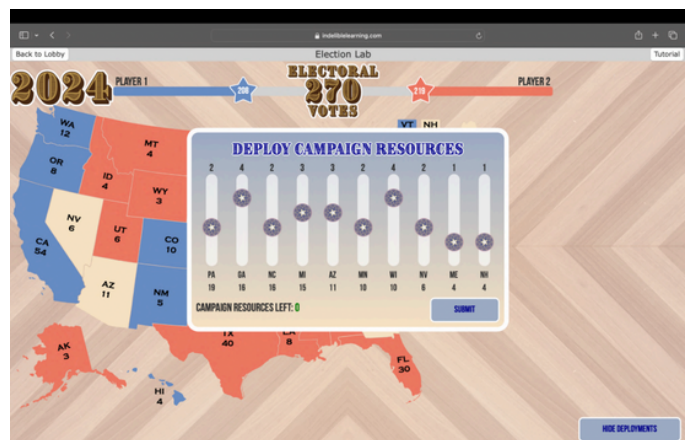


Figure 2b Campaign resource deployment control center for the “Blue” player



Figure 2c Campaign resource deployments on map for “Blue” player

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Note: The player to make the next move is the player who has less electoral votes. This is why during the gameplay, the “Blue” player is the first to choose a swing state for the game to begin. The screen will look similar for both players, but each player’s screen is individualized to the number of campaign resource tokens each player allocated.

Once the player who has less electoral votes chooses a swing state, a dice roll determines whether the swing state will become a “Red” or “Blue” state. These randomized dice rolls reflect the uncertainty and unpredictability of winning over a swing state in a real election. Each campaign resource token is represented by one dice. For example, if the “Blue” player deployed three tokens to the state of Michigan, the player would have three dice entered into the dice roll that will determine which player wins the state. If the “Red” player deployed three tokens to the state of Michigan, this means that both players would each have a 50% chance of winning the state. However, if one of the players places more resource tokens on a state than their opponent, that player has a greater chance of winning that state. As the game progresses, players continue battling over swing states through dice rolls until there are no swing states left. Once there are no swing states left, a player has already reached 270 electoral votes at this point, and thus has won the election.

Another version of the game exists in which players are able to utilize event cards. These event cards allow players to move around their campaign resource tokens, even after deploying them. The two kinds of event cards players can utilize are “Add” and “Shift” cards; “Add” cards allow players to add an additional campaign resource token to a swing state, and “Shift” cards allow players to remove a token from a swing state (one that has not been campaigned over) and place it on another swing state. These event cards add another layer of complexity to the game, providing a more realistic sense of what campaigning over swing states for a presidential election is like.

Election Lab Classroom Sessions

For the actual conduct and collection of

data for my study, I went into six different government classes, all of which varied in size, ranging from four students to over thirty. Each classroom session that I facilitated took approximately thirty minutes to one hour depending on the number of students participating in that class, as well as the speed of the internet as the version of Election Lab I had students play was online. Subjects used either personal laptops or district-provided chromebooks to complete both surveys and play Election Lab. The simple survey-game-survey approach made a straightforward and efficient method of conducting my study for each classroom session I facilitated.

Before students played *Election Lab* and after the pre-Election Lab survey was complete, a short video introducing the game and its purpose was shown. Following the video, I then opened up an *Election Lab Online* game room, which students were asked to join using a passcode specific to that game room. Once students joined the game room, they were randomly paired with another student as their opponent in *Election Lab*. In each classroom session I facilitated, participants of my study played two rounds of *Election Lab*: one without event cards, and one with event cards, as explained previously. First, study participants played *Election Lab* without event cards. After all study participants and their opponents completed the first round of the game, they played a second round with event cards. For the second round of the game, students were randomly paired with another student as their opponent.

After the second round of Election Lab was complete, students were asked to fill out the post-Election Lab survey (Appendix C.2), which included the same questions regarding the student’s civic knowledge and attitudes towards their own civic engagement, as well as additional questions regarding their thoughts on the game itself, their learning takeaways from the game, and other questions yielding qualitative data.

Rationale of Methodology

Utilizing Election Lab to measure the effects of youth civic education on youth perspectives towards civic engagement is both particularly timely and relevant with 2024 being an election year. Additionally, the particular

group of study participants which I chose - newly or nearly eligible voters currently enrolled in high school government classes - is appropriate in analyzing the existing degrees to which civics is currently taught in high schools.

FINDINGS AND ANALYSIS

Previous to receiving survey results, I predicted that playing Election Lab would increase both students’ civic knowledge as well as change their attitudes towards their own civic engagement; the results yielded in this study express the varying degrees of impact civic education has on high school civics students.

When analyzing the findings of my study, I examined two major parts to answer my research question; the first part I assessed was the subjects’ civic knowledge and the second part I assessed was the subjects’ attitudes toward their own civic engagement.

The following figures provided are organized as follows: blue data represents survey results before playing the game, and red data represents survey results after playing the game.

Students’ Civic Knowledge of the Electoral College

The data gathered from this study show that after playing Election Lab, the civic knowledge students had on the Electoral College, voting system, and the upcoming election saw a general increase. The questions asking students on their knowledge of the Electoral College and voting system in the United States were the same in both the before and after surveys. This was done in order to effectively measure the potential changes in civic knowledge students might experience after playing Election Lab.

The frequency of answering questions regarding the specific number of electoral votes California has in 2024 (54) and the number of electoral votes needed to win the 2024 presidential election (270) correctly increased after playing Election Lab (Figure 3). In order to measure these results numerically, these questions were both measured on a scale of 0 to 1 points, with 0 points awarded for answering the question incorrectly and 1 point awarded for answering

the question correctly. Figure 3 shows the mean value of answering these questions correctly; as seen in the figure, the “Pre-ELO” data is less than the “Post-ELO” data. This indicates that after playing the game, students were able to more accurately identify the number of electoral votes in California and the number needed to win the upcoming election.

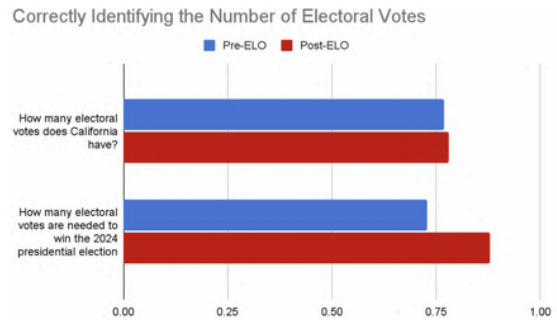


Figure 3 Correctly identifying the number of electoral votes

Additionally, playing Election Lab showed an increase in students’ awareness of swing states. The results of one question that asked students to identify six swing states out of a set of fourteen states (eight were non-swing states) shows this. This question had a range of 0-14 answers, and asked subjects on information one most likely would not have complete knowledge on before playing Election Lab. Figure 4 shows the frequency at which students identified the given fourteen states correctly; the frequency at which subjects categorized the fourteen states correctly increased after playing Election Lab. As seen in Figure 4, the frequency of identifying twelve, thirteen, and all fourteen states correctly rose dramatically.

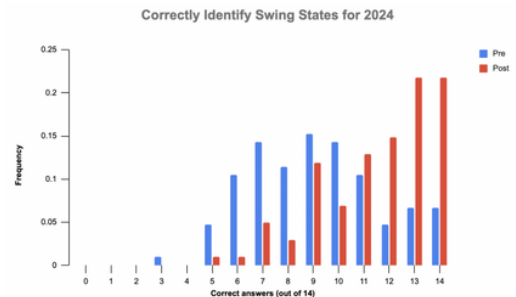


Figure 4 Correctly identifying swing states (and non-swing states for 2024)

Comparing the data from both the before and after Election Lab surveys showed that after students played the game, their civic awareness and knowledge of the Electoral College and voting system in the U.S. increased (additional data supporting this is shown in Appendix F.)Initially, I predicted that Election Lab would have a similar effect on students' perspectives towards their own civic engagement. However, this was not the case.

Students' Perspectives Towards Civic Engagement in the 2024 Presidential Election

The results of this study indicate that playing Election Lab had no significant impact on the subjects' attitudes towards being civically engaged themselves. A series of questions regarding students' perspectives on their own civic engagement was asked, where students ranked on a scale of 1 (very unlikely) to 5 (very likely) their likelihood of participating in the next election. Figure 5 shows the subjects' average self-rankings on their likelihood of participating in the 2024 presidential election.

Likelihood to Participate in the 2024 Presidential Election

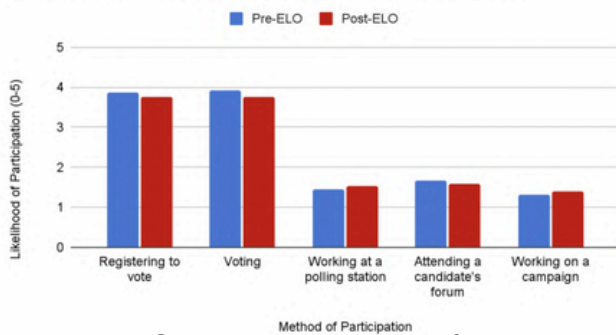


Figure 5 Subjects' likelihood of participating in the 2024 election

Note: When asked to rank their likelihood of participating in the next election, the answer choices were as follows: 0 (N/A), 1 (very unlikely), 2 (unlikely), 3 (not sure), 4 (likely), 5 (very likely).

The participants' likelihood of participating in the 2024 election was seen to vary based on the different methods of participation, but was seen to remain close to unchanged even after playing Election Lab. When asked how likely they were to register to vote and actually vote, the subjects'

likelihood of doing so stayed within the "not sure" to "likely" range. Both the likelihood of registering to vote and voting decreased slightly, but did not drop significantly enough to put the data in a different range on the scale of likelihood. Similarly, when asked the likelihood of working at a polling station, attending a candidate's forum, or working on a campaign, the subjects' likelihood of participating in these methods remained between the "very unlikely" and "unlikely" range before and after playing the game.

Limitations

As with all research, my study had its limitations. The most notable limitations of this study were the size and demographic of the group of study participants. Due to the attainability and proximity of my research study, the majority of the study participants were from suburban white communities. Thus, there is still a wide-ranging diverse group of individuals that can be accounted for. Additionally, the sample size of my study, 106 students, does not encapsulate each high school senior in the United States. Although the demographic and size of the subjects is not a representative sample of all high school senior government students around the country, the findings of this study are still indicative of the impact of civics education.

CONCLUSION AND FUTURE IMPLICATIONS

The results of this study indicate that *Election Lab* had a significant impact only on the civic knowledge of the subjects, but did not have a significant impact on the subjects' attitudes towards their own civic participation. These findings have important implications on the future of youth knowledge and involvement in civics; civics education alone will not propel youth to become more civically engaged, thus going against both my original prediction of the results as well as previous research studies linking youth civic education leading to increased youth participation (CIRCLE, 2020).

What this means for the future of civics education

The implications of this study reveal that in this field of research, there is another gap to be explored: encouraging youth to become civically engaged. Although the phrase "knowledge is power" holds true, what can be done with such a power if its purpose is

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unknown? Though this study indicates that incorporating Election Lab, and possibly other creative forms of civics education, into schools can help increase the civic knowledge of youth populations, there needs to be a stronger emphasis on the encouragement of civic engagement.

With the data collected and implications of this research described, it is with hope that school districts across the country will take steps towards fostering a more civically engaged youth. The first step in doing so could be to implement Election Lab and other interactive forms of civics education into classrooms, increasing the civic knowledge of students. Although there is still much to be explored on emphasizing the importance of civic engagement in schools, beginning with increasing civic educational resources is certainly a step in the right direction for creating a more civically conscious generation in the United States.

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