

Is Green Education Blue or Red? State-Level Environmental Education Program Development Through the Lens of Red- and Blue-State Politics

Richard Craig Crouch and Dorian S. Abbot

ABSTRACT: Environmental educators have long dealt with the charge that the practice of teaching about environmental issues is an attempt to introduce a liberal agenda into the classroom curriculum. However, traditionally Republican states and traditionally Democratic states are both among the nation's leaders and laggards in institutionalizing environmental education (EE) programs at the state level. Because of the political power of the charge of liberal bias in EE politics, it is important for researchers to try to determine the veracity of this charge in some meaningful way. The authors applied quantitative statistical methods to this issue and found that, in general, there were not significant differences among the degrees of state-level EE program activity between Democratic states and Republican states. In short, the political party affiliation of a given state is not a reliable predictor of that state's EE program activities. Thus, the evidence does not support the claim that EE is solely a liberal undertaking.

KEYWORDS: bias, conservative, liberal, party affiliation, policy, politics, state

Environmental educators have long dealt with the charge, largely from the right, that the practice of teaching about environmental issues is an attempt to introduce a liberal agenda into the classroom curriculum.¹ Conservative members of the press, Republican members of the U.S. Congress, and conservative think tanks and scholars have labeled environmental education (EE) as nothing more than liberal propaganda. *The National Review* has called EE "the classroom crusade

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to train little eco-warriors” (O’Beirne, 1997). Congressman Van Hilleary (Tennessee Republican) has said that the liberal culture pervading the U.S. Environmental Protection Agency (EPA) is spilling over into the classroom via the EPA’s EE program activities. Hilleary said of the institutional culture at the EPA, “[It is] so far to the left of what I consider common sense, it concerns me that they would have an aspect of forming thoughts in young people’s minds across the country” (*Examining the National Environmental Education Act*, 2000, p. 29). In response to bipartisan attempts to reauthorize the National Environmental Education Act, the Competitive Enterprise Institute (CEI; 2001) issued a press release entitled “Federal Government Should Stop Funding Liberal Activist Groups,” which drew attention to EE’s “liberal agenda” and “liberal indoctrination [of] children.”

For Earth Day 2001, John Stossel, coanchor of ABC’s *20/20*, hosted a special program entitled “Tampering with Nature” (Stossel & Dauer, 2001) in which he derogated the liberal indoctrination of children that he suggested was inherent in EE. Stossel defended himself on FOX News’ *The O’Reilly Factor* by referring to his critics as “the totalitarian left” (Kurtz, 2001). CEI picked up the Stossel piece and used it as part of its own campaign against EE by suggesting that Stossel exposed “how the educational establishment feeds children environmental misinformation . . . scaring children into becoming tomorrow’s environmental activists. . . . Some of the liberal indoctrination children receive in the classroom under the guise of environmental education” (Logomasini, 2001). Two of the most prolific critics of the alleged liberal bias in EE are Sanera and Shaw (1996), who collaborated on what has become the tome of the conservative attack on EE, *Facts Not Fear: A Parents’ Guide to Teaching Children About the Environment*. Marilyn Quayle, wife of former Vice President Dan Quayle, in her forward to *Facts Not Fear*, suggested that exaggerated environmental claims have been introduced into the classroom by environmental activists whom she alleged are either misinformed or deliberately trying to scare children. In the book, Sanera and Shaw purport to expose the alleged liberal bias in EE by highlighting the lack of emphasis on individual property rights and antiregulatory or free-market solutions to environmental problems.

In short, conservatives from the press, academia, government, and the nonprofit sector have proposed that EE is little more than liberal propaganda. Yet, some traditionally conservative states are leading the nation in institutionalizing EE at the state level. For example, Kentucky and Pennsylvania both have comprehensive EE state plans (Ruskey & Wilke, 2005) that have been advanced by and attributed largely to the Republican leadership of Congressman Harold Rogers (Kentucky) and former Governor Tom Ridge (Pennsylvania). On the other hand, some traditionally liberal states, such as Oregon and Rhode Island, have some of the least comprehensive EE state plans in the nation (Ruskey & Wilke). Although these examples are anecdotal, they do raise questions about the veracity of the assertion that EE is simply liberal activism in the classroom, leaving the question of the intersection of politics and EE effectively unanswered. In the present study, we endeavored to address this issue quantitatively. We showed that, in general, the EE infrastructure in traditionally conservative states is not statistically different from that in traditionally liberal states.

To address this problem, we had to choose reasonable metrics for institutionalized EE programs in a given state and the liberalness or conservativeness of that state. Bound by necessity and the prevailing terms of contemporary political discourse, we used political party affiliation as a proxy for a state’s liberalness or conservativeness. We considered political party affiliation of a state to be determined by (a) voting behavior in presidential elections, (b) party composition of state legislature, and (c) party of state governor. We used data from the elections closest to the time of data collection on institutionalized EE programs. Using equivalent data from the other neighboring elections did not qualitatively change our results. Considering long-term political affiliation—dating to periods of historic resource conservation—was beyond the scope of the present work.

To quantify a state's EE infrastructure, we used surveys conducted by Ruskey, Wilke, Kirk, and Beasley.² In 1994, Ruskey and Wilke identified components of a comprehensive state-level EE program. With additional researchers, they then conducted surveys in 1995 (Kirk, Wilke, & Ruskey, 1997), 1998 (Ruskey, Wilke, & Beasley, 2001), and 2004–2005 (Ruskey & Wilke, 2005) to evaluate the extent to which each state was implementing these components. In the next section of the present article, EE Data, we describe these data and how they have been used. In the Results section, we describe the comparison of a state-level EE programming with measures of a state's liberalness or conservativeness. In the Discussion section, we interpret our results and conclude.

EE Data

For Kirk, Wilke, and Ruskey's 1995 survey (Kirk et al., 1997), the National Environmental Education Advancement Project (NEEAP) staff developed a survey instrument to determine the status of state-level EE in the United States and measure the 16 component areas that constitute a comprehensive state-level EE program. A panel of 10 EE leaders reviewed the survey instrument to ensure its validity, and it was then mailed to 5 EE leaders in each state: the EE specialists in the state's department of education (or the person with EE responsibilities), the president of the state's EE association, the state's Project Learning Tree coordinator, the state's Project WILD coordinator, and the state's National Association of Conservation Districts education liaison. Kirk et al. reported, "We assumed that those individuals, as central contacts for EE in the states, had an overall perspective of their state's EE programs" (p. 10). Of the 253 surveys distributed, 113 EE leaders, representing all 50 states, responded by providing information about their state's EE infrastructure (Ruskey et al., 2001).

For their 1998 survey, Ruskey et al. (2001) added 7 component areas to the original 16. They distributed the survey to 295 EE leaders of whom 173 responded, representing all 50 states. When the researchers encountered conflicting answers, respondents were asked to submit additional information. When conflicting answers persisted, the researchers conducted tie-breakers by contacting additional parties for further information about EE programming in that state. By 2004, there were 31 survey questions. For this most recent study, the Third Survey on the Status of Environmental Education Programs at the State Level, 348 EE leaders were contacted, and 82 completed surveys were submitted—again, representing all 50 states (Ruskey & Wilke, 2005).

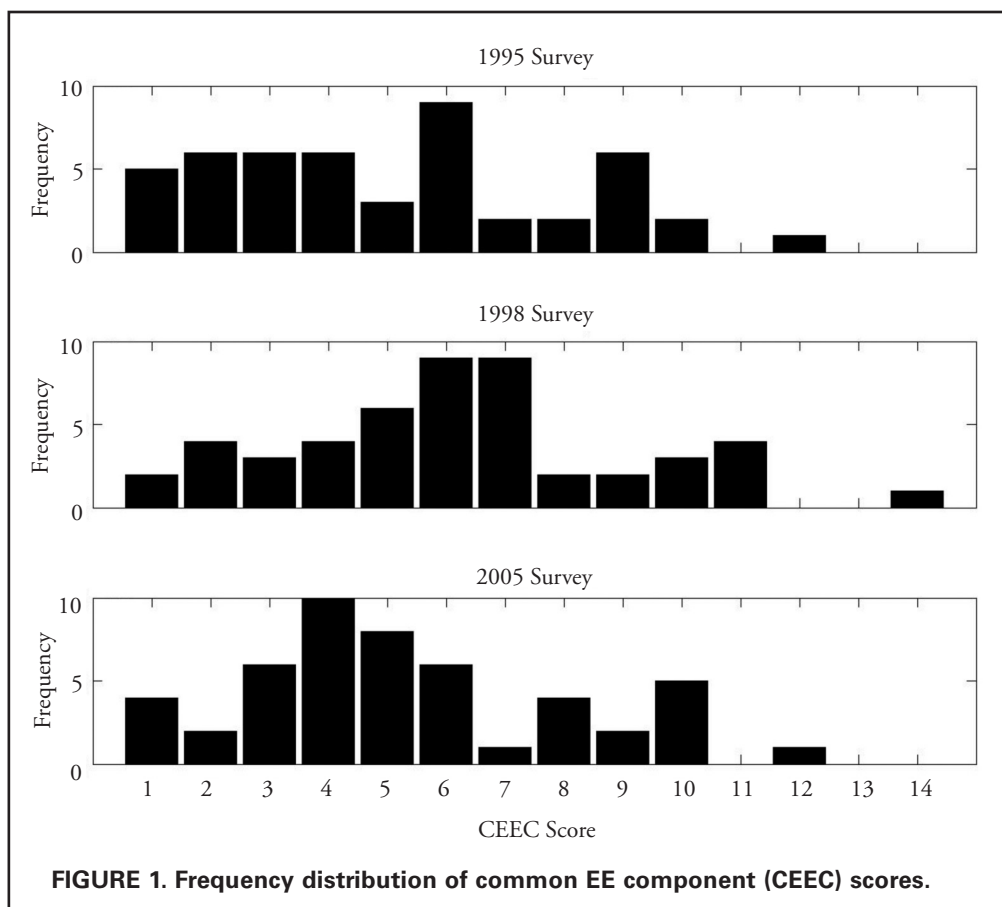
In all three studies' surveys, the researchers sought to determine whether the components of a comprehensive EE program (EE components) were already in place, being developed, or not being developed. We believed that the in-place data formed the most useful metric for our purposes because the definition of *in-development* was more vague than that of *in-place*, allowing for confusion among those surveyed, and because there is no way to verify whether a program that was in development at the time of data collection was ever actually implemented. In the present study, we focused on the in-place scores for the following 14 EE components that are common to each survey³ (CEEC):

1. state EE master plan
2. coordinated teacher in-service training
3. required EE training for teacher certification or licensing
4. state EE curriculum guides
5. EE learning objectives or outcomes
6. state-supported EE grants program
7. state assessment that includes EE
8. state EE board

9. state EE office
10. state-level EE centers or regional offices
11. state interagency committee
12. state EE association
13. funding source for EE
14. EE trust fund

This reduction of the data to common EE components allowed us to compare the surveys through time and did not affect our results for any individual survey. In each of the three survey years, the common EE score was highly correlated with the total in-place score and uncorrelated with the in-development score.

There was no readily apparent trend in common EE score distribution across the surveys (Figure 1). For a quantitative comparison between the surveys, we used the two-sided Mann–Whitney (MW) test—a nonparametric rank test, which makes no assumptions about the underlying statistical populations. The MW test indicated that the 1995 and 1998 common EE scores differed at the 5% significance level ($p = .041$). Differences between the 1995 and 2005 surveys and between the 1998 and 2005 surveys were not significant. Therefore, there was some meager evidence for a peak



in EE activity in the 1998 survey, but there was no evidence for a monotonic trend in time across the surveys. Some states did show large changes in EE activity during this period, but the trends largely cancelled when averaged nationwide.

Results

The main focus of our study was a quantitative determination of the association between state politics and state EE programs. For lack of a better option, we used political party affiliation as a proxy for liberalness or conservativeness. We took the Democratic party to be the liberal party and the Republican party to be the conservative party. We considered political party affiliation of a state to be determined by (a) voting behavior in presidential elections nearest the time of EE data collection, (b) party composition of state legislature, and (c) party of state governor.

Political Party Affiliation Based on Voting Behavior in Presidential Elections

We believed voting behavior in presidential elections may be a good means to assign each state a party affiliation because voting is statewide and local issues are less likely to determine voting behavior. However, a potential drawback associated with using presidential election data is that we used it for comparison with CEEC measures that may have a curricular component. Yet, curricula are largely established by state governments rather than by the federal government, even with federal financial support.

We used a one-sided *MW* test to evaluate whether there were differences between the CEEC scores of states that voted for the Democratic candidate in the presidential election (nearest the time of CEEC data collection) and those of states that voted for the Republican candidate. Consistent with the thought paradigm described in the introduction, we tested the alternative hypothesis that Democratic states have higher CEEC scores than do Republican states. We found that we could reject the null hypothesis that Democratic states do not have higher CEEC scores than Republican states at the 5% significance level only for the 1998 survey ($p = .011$; Table 1).

For each NEEAP survey, we also regressed the CEEC score against the percentage of the state population that voted for the Republican candidate in the nearest presidential election (Figure 2). We found that for all NEEAP surveys, the correlation between the two statistics was exceedingly low (Table 2), implying that the percentage of the state population that voted for the Republican candidate in the presidential election has little predictive power for CEEC score on a NEEAP survey.

TABLE 1. Mean Common EE Component Score for States That Went Republican and Democratic in the Previous Presidential Election for Each National Environmental Education Advancement Project Survey

Survey year	Election year	Republican		Democrat		MW <i>p</i> value
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
1995	1992	4.2	2.9	5.5	2.9	.088
1998	1996	5.5	2.7	7.4	2.9	.011
2005	2004	5.2	2.5	5.7	3.3	.366

Note. We also calculate the one-sided Mann–Whitney (*MW*) *p* value to test whether the Democratic states have higher common EE component scores than do the Republican states.

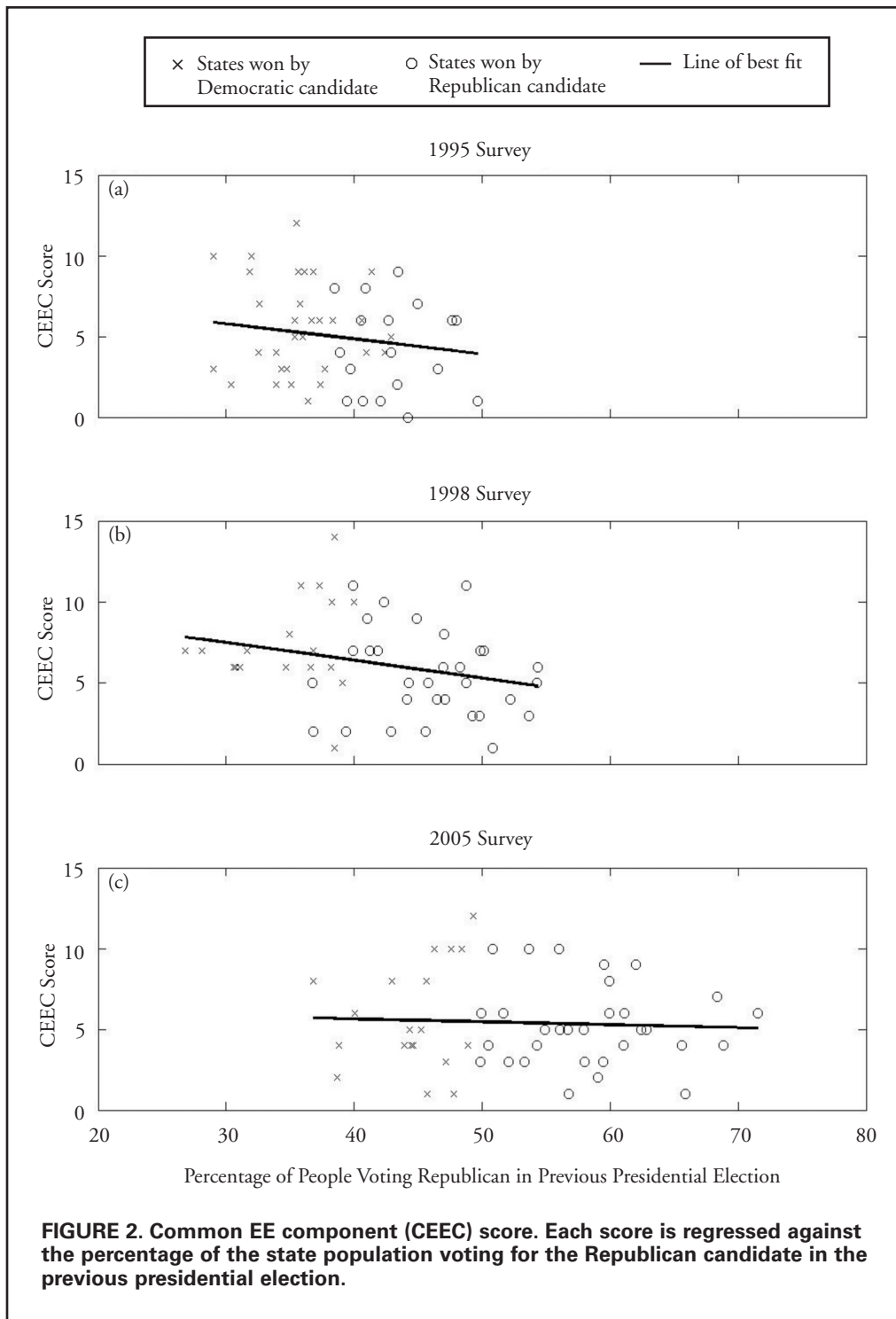


FIGURE 2. Common EE component (CEEEC) score. Each score is regressed against the percentage of the state population voting for the Republican candidate in the previous presidential election.

However, we found that the slope of the line of best fit for the 1998 survey was significantly less than zero at the 5% significance level (one-sided test, $p = .032$; Table 2).

Political Party Affiliation Based on Composition of State Legislature

Because of the important role that state legislatures play in setting education curricula within a state, we assigned political party affiliation on the basis of composition of state legislature. We did not include Nebraska, which has a unicameral, nonpartisan state legislature. Each of the other states has a bicameral system, so it is possible for the legislature to have both houses controlled by Republicans, to have both houses controlled by Democrats, or to have control of the houses split between Republicans and Democrats. We compared the CEEC scores between these groups by using one-sided MW tests for each NEEAP survey. We found evidence that states with legislatures controlled entirely by Democrats and states with split legislatures had higher CEEC scores than did states with legislatures controlled entirely by Republicans, at the 5% significance level for the 1995 survey ($p = .016$ and $p = .025$, respectively; Table 3). We found no other significant differences between the groups.

For each NEEAP survey, we also regressed the CEEC score against the percentage of representatives in each state's legislature who are Republican (Figure 3). To calculate this percentage, we weighted upper and lower house members equally. We found that for all NEEAP surveys, the cor-

TABLE 2. Correlation Squared and p Value for One-Sided Test on the Line of Best Fit (LBF) for the Common EE Component Score

Survey year	Election year	r^2	LBF p value
1995	1992	.025	.137
1998	1996	.071	.032
2005	2004	.003	.355

Note. Scores are regressed against percentage of the state population voting for the Republican candidate in the previous presidential election for each National Environmental Education Advancement Project survey.

TABLE 3. Mean Common EE Component Score

Survey year	Election year	Republican		Split		Democrat		MW p value		
		M	SD	M	SD	M	SD	D > R	D > S	S > R
1995	1994	3.8	2.8	5.8	2.6	5.9	3.0	.016	.449	.025
1998	1996	6.0	3.0	6.3	3.9	6.5	2.3	.155	.244	.386
2005	2004	6.0	2.9	4.6	3.1	5.4	2.3	—	.189	—

Note. Scores are for states coded in the following groups: R = entire state legislature controlled by Republicans; S = upper and lower houses in state legislature split between Republicans and Democrats; D = entire state legislature controlled by Democrats. The authors also calculated the one-sided Mann-Whitney (MW) p value comparing each group with the other two. We indicate the directionality of the MW test with >. The authors omitted the MW p value when this directionality was violated.

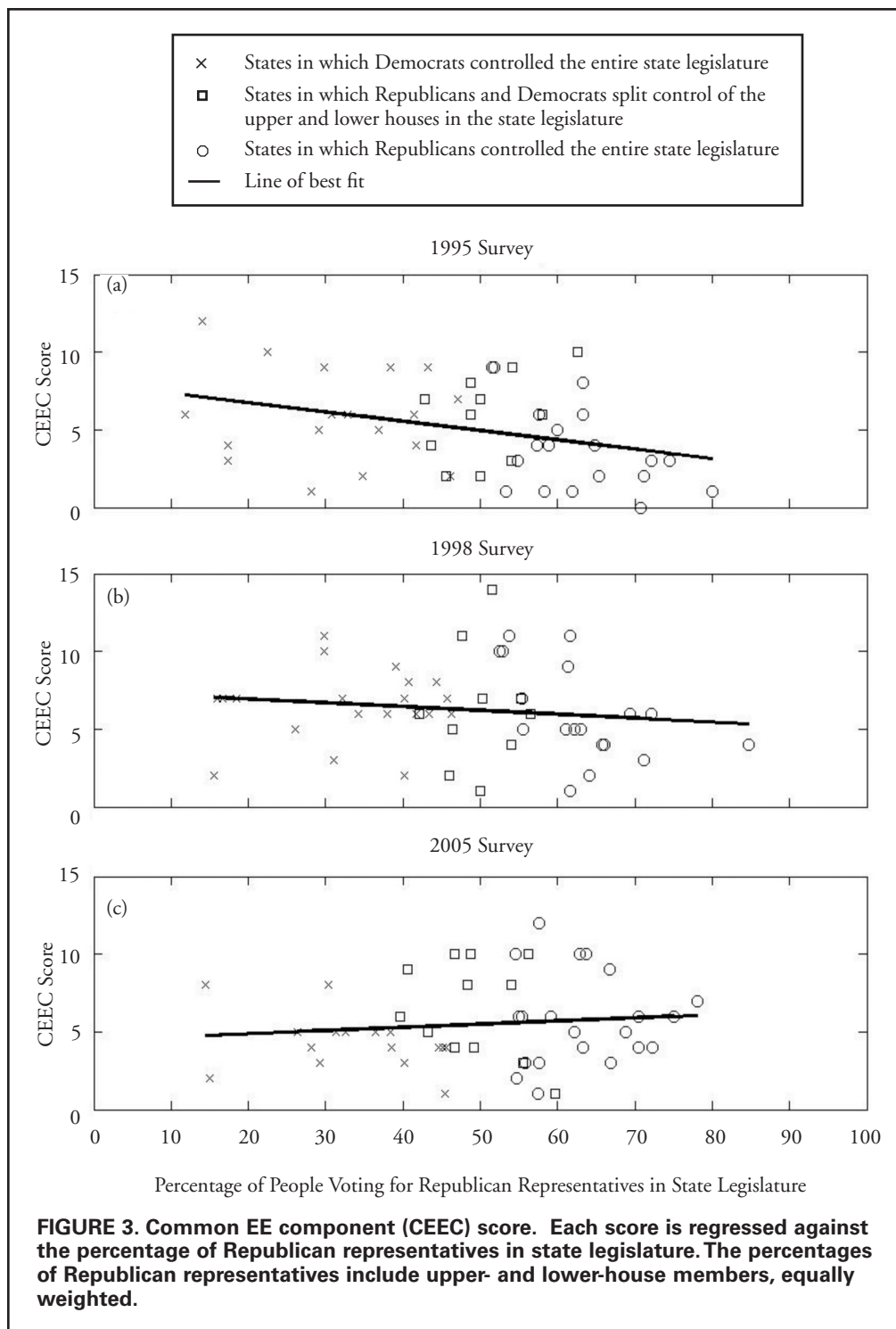


TABLE 4. Correlation Squared and Line of Best Fit (LBF) p Value

Survey year	Election year	r^2	LBF p value
1995	1994	.111	.010
1998	1996	.018	.182
2005	2004	.008	—

Note. LBF p value for common environmental education component score regressed against percentage of Republican members in state legislature for each National Environmental Education Advancement Project (NEEAP) survey. The authors did not include the one-sided p value for the 2005 NEEAP survey because of the LBF slopes in the opposite direction. The year the state legislatures were elected is listed for reference.

TABLE 5. Mean Common EE Component Score for States With a Republican Governor and Democratic Governor, for Each National Environmental Education Advancement Project Survey

Survey year	Republican		Democrat		MW p value
	M	SD	M	SD	
1995	4.7	2.8	5.6	3.1	.201
1998	6.2	2.8	6.3	3.2	.422
2005	5.4	2.3	5.5	3.4	.422

Note. The authors calculated the one-sided Mann–Whitney p value to test whether the states with a Democratic governor have higher common EE component scores than do states with a Republican governor.

relation between the two statistics was exceedingly low (Table 4), implying that the percentage of representatives in each state’s legislature who are Republican has little predictive power for CEEC score on an NEEAP survey. Consistent with our MW test results, we found that the slope of the line of best fit for the 1995 survey was significantly less than zero at the 5% significance level (one-sided test, $p = .010$; Table 4).

Political Party Affiliation Based on State Governor

Our last method of designating political party affiliation was using the party of the state’s governor. As with voting behavior in presidential elections and composition of state legislatures, for each NEEAP survey, we performed one-sided MW tests to determine if states with a Democratic governor had higher CEEC scores than did states with a Republican governor.⁴ We found no evidence for such a difference (Table 5).

Discussion

We tried to determine whether the political party affiliation of a state is related to its state-level EE program components. We used the results of NEEAP surveys conducted in 1995 (Kirk et al.,

1997), 1998 (Ruskey et al., 2001), and 2004–2005 (Ruskey & Wilke, 2005) to determine the degree of EE infrastructure in each state. We used the following three measures to determine the political party affiliation of a state: voting behavior in nearest presidential election, party composition of state legislature, and party of state governor.

We found that Democratic states had significantly higher CEEC scores than did Republican states on the 1995 survey when we determined party affiliation by the first measure, but not when we determined party affiliation by the second or third measure. Similarly, we found that Democratic states had significantly higher CEEC scores than did Republican states on the 1998 survey when we determined party affiliation by the second measure, but not when we determined party affiliation by the first or third measure. Finally, we found that Democratic states did not have significantly higher CEEC scores than did Republican states on the 2005 survey, by any method of designating party affiliation.

Before interpreting these results, we note one point of significance when multiple tests are performed. In determining the relation between political party affiliation and CEEC score, we calculated *p* values from six lines of best fit and 15 MW tests. Because we used a 5% significance level, we would expect roughly one Type I error (false rejection of the null hypothesis) from random variation. This may be the cause of the two isolated cases in which the political party affiliation of a state was associated with its CEEC score. This point is supported by the fact that these isolated results were not robust when a different measure of political party affiliation was used.

Our results suggest that, in general, the political party affiliation of a state is not closely associated with its EE program activity. In each case in which we used a metric of a state's political party affiliation as a predictor of its CEEC score, we found an abysmal correlation, implying that political party affiliation has little predictive power for CEEC score. Additionally, we only found evidence that the political party affiliation of a state may be associated with its CEEC score in two isolated cases, and, for reasons explained earlier in the present article, we doubt the validity of this evidence. We found no broad and consistent evidence for higher CEEC scores in Democratic states than we did in Republican states.

The most important potential weakness of our study is the NEEAP survey data. The NEEAP surveys suffer from several shortcomings, including the following: (a) It is not clear whether the EE measures used are the best measures to define a robust state-level EE program (the difficulties inherent in finding agreement among experts on the proper EE measures is evidenced by the large changes in included EE measures from one survey to the next); (b) It is not clear that a survey instrument is the correct tool for this type of data collection (such an instrument is open to respondent bias on questions about which there should be no equivocation); and (c) There is no relative ranking among the EE measures in the NEEAP survey results; yet, some measures appear to be of more consequence to actual EE programming than others.

However, despite some shortcomings, we believe that the NEEAP surveys represent a useful starting point from which to approach this problem. In addition, the NEEAP surveys are the only existing nationwide data on state-level EE program activities, and, as such, they were the only data available to us. The issue of establishing a firmer metric of state-level EE program activity will have to be resolved in the future.

In addition, the question of why the political party affiliation of a given state is not a useful predictor of that state's EE program activity is one that deserves attention in the future. Because of the political power of the suggestion that EE is an inherently liberal exercise, it is important to understand that the political party affiliation of a given state is not a useful predictor of that state's EE program activity. Understanding why that is true is an undertaking that is more complex and beyond the scope of the present article. Nevertheless, we hope this article will inform future research on that and other topics.

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NOTES

1. We understand the limitations of the terms *liberal* and *conservative*, but in this article, we adhere to the terms of contemporary political discourse.

2. Hereafter, we call this the *NEEAP survey* because the research was done under the auspices of the National Environmental Education Advancement Project, which "supports the development and expansion of quality EE programs through a variety of state and local capacity building efforts. Many NEEAP efforts encourage the development and implementation of Comprehensive Environmental Education Programs at the state and local levels."

3. Of the original 16 components in 1995 (Kirk, 1997), *computerized networking system for EE materials and services* later became *state-level internet database with searchable services and resources*, so it was removed from our list. In addition, *K-12 EE Instruction Requirements* became *State By-law or Requirement for K-12 EE Instruction*, so it was removed from our list, bringing the original 16 measures to 14 for our purposes. Although there were several other examples of word changes from one survey to the next (e.g., *state EE master plan* became *state comprehensive EE plan* in a later survey), we included them in our list of components that were common to all three surveys if we could safely assume that EE leaders in each of the states could recognize the two terms as essentially asking for the same information.

4. We neglected states that had an Independent governor.

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