

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

BEST PRACTICES AND NEW AREAS FOR RESEARCH

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SUMMARY

This report presents the current state of knowledge about the practice of election administration in the United States in three key dimensions:

1. baseline demographics;
2. credentialing and skills development through training and best practices; and
3. turnover and retention.

Research includes information about who works in this field, what they do, how they arrive at their positions, their credentials and other forms of professionalization, and the current stressors they face in a unique and perhaps unprecedented environment. The report is the work of an interdisciplinary team; it covers the literature of election administration and other fields that may inform these issues. Supporting materials include published books, peer-reviewed journal articles, reports from well-known think tanks and research groups, and, in some cases, collections of data

that are publicly available but have not been systematically compiled or synthesized. Findings suggest areas for further study within the election administration literature, and connections with other fields that may prove fruitful for expanding the extant literature and improving practice.

1. INTRODUCTION AND OVERVIEW

This report presents the current state of knowledge about the practice of election administration in the United States in three key dimensions: 1) baseline demographics; 2) credentialing and skills development through training and best practices; and 3) turnover and retention. Lessons learned from this collection of information about who works in this field, their skills and qualifications, and the current stressors they face in a unique and perhaps unprecedented environment surrounding American elections may inform future research and practice in the field.

Contents reflect the efforts of faculty and practitioners who specialize in election administration research and in political science, public administration, intergovernmental relations, economics, pedagogy and adult education, and state and local government administration more broadly. The team was guided by two goals: 1) to identify research on these topics from the literature on election administration as well as other literatures and areas of government service from which we can draw important lessons and information, and 2) to understand the current state of the field with respect to practice. Through synthesizing and analyzing these, we identify future avenues for research that may prove fruitful for expanding the extant literature and improving practice. Supporting materials include published books, peer-reviewed journal articles, reports from well-known think tanks and research groups; in some cases, supporting materials are collections of data that are publicly available but have not been systematically compiled or synthesized with commentary, and we note where that is the case. This interdisciplinary collaborative effort maps extant research about the work of election administrators and voter registrars in the United States, and covers permanent local full time staff as well as the cadre of poll workers and others who are considered temporary or seasonal workers. Major sections of the report discuss 1) workforce demographics; 2) approaches to training, certifying, and otherwise professionalizing or credentialing local election office staff and temporary poll workers; and 3) workforce development and current stressors pressing on those in the field.

WORKFORCE DEMOGRAPHICS

CURRENT PROFILE

The election administration workplace, home to the “stewards of democracy” (Adona et al. 2019), is highly localized and varies widely. The largest of the country’s approximately 8,000¹ local election jurisdictions have hundreds of staff, and the smallest only one or two. US Census data do not reflect details about the election administration workforce. The most comprehensive data are drawn from a series of surveys of local election offices conducted by the Democracy Fund and the Election and Voting Information Center at Reed College. Demographic data about office leadership include age, gender, race, education, method of selection, salary, and partisan identification² (Adona et al. 2019; Gronke, Manson, and Lee 2019; 2020; Gronke, Manson, and Crawford 2018; Mason, Adona, and Gronke 2020). Demographic data show little difference over the past 15 years (Gronke et al. 2023 comparing to Fischer and Coleman 2011), with the exception that salaries have not kept pace with inflation, and educational attainment has increased. The typical election administrator is white, female, aged 50 or older, with some college education; the election administration workforce remains far more female and more white than other areas of general government administration and management. Differences exist based on jurisdiction size: larger jurisdictions are more likely to be led by a male who is under age 50 and has a college degree. Election officials leading larger jurisdictions are also more likely to have college degrees and have higher salaries.

Industry-level workforce salary data are available for broad categories of administrative positions in public administration. Table 1 contains the population-weighted summary statistics from the 2020 American Community Survey for the latest industry

1 Although 8,000 is not an exact count, it is widely reported in research; the count depends on levels of government, functions, and other factors (see, Gronke et al. 2023 forthcoming).

2 Strong majority white, non-Hispanic, female, aged 50 or older, majority elected, half with at least a college degree and slightly less than half earning more than \$50,000/year. Partisan identification is divided among Republican, Democrat, and Independents. See <https://democracyfund.org/idea/pursuing-diversity-and-representation-among-local-election-officials/>

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classification (NAICS) codes for Public Administration.³ The first column shows means for the working-age population (ages 16-65), employed in salaried jobs, and not living in group quarters. The next four columns increasingly restrict the sample. The second and third columns report means for the “Public Administration” industry and the “Office and Administration Support Occupations” within the Public Administration industry, respectively.⁴ The final two columns show the sample means for the “Other general government and support” sub-industry and for office and administration workers, within that narrow industry. However, no systematic research identifies where election administrators (and poll workers) fall within these broad categories.

3 (See <https://usa.ipums.org/usa/>; <https://usa.ipums.org/usa/voliii/ind2017.shtml>).

4 See <https://usa.ipums.org/usa/volii/occ2018.shtml>.

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Table 1. Summary Statistics from the 2020 American Community Survey

	Full Sample	Public Admin	Public Admin/ Office Admin	Other Gov Support	Other Gov Sup- port/ Office Admin
Income from Wages	\$57449.3 (67891.2)	\$57157.5 (48284.6)	\$36171.9 (33073.8)	\$33006.9 (40782.2)	\$14177.8 (30980.2)
Weeks Worked	47.73 (11.52)	42.63 (18.84)	39.01 (21.12)	29.21 (24.10)	16.70 (21.63)
Usual Hours Worked per Week	39.24 (11.28)	35.75 (16.35)	32.19 (15.87)	28.47 (17.69)	22.30 (17.97)
Age	39.67 (13.15)	47.07 (14.24)	49.23 (15.17)	54.31 (16.66)	59.27 (17.45)
Black	0.111 (0.314)	0.152 (0.359)	0.178 (0.382)	0.140 (0.347)	0.147 (0.354)
Hispanic	0.186 (0.390)	0.132 (0.339)	0.153 (0.360)	0.123 (0.328)	0.141 (0.348)
Female	0.470 (0.499)	0.475 (0.499)	0.765 (0.424)	0.497 (0.500)	0.716 (0.451)
Married	0.495 (0.500)	0.596 (0.491)	0.528 (0.499)	0.583 (0.493)	0.530 (0.499)
Graduate/Professional	0.118 (0.323)	0.188 (0.390)	0.0791 (0.270)	0.150 (0.357)	0.166 (0.372)
Bachelors	0.236 (0.424)	0.291 (0.454)	0.232 (0.422)	0.235 (0.424)	0.224 (0.417)
Some College	0.306 (0.461)	0.342 (0.474)	0.442 (0.497)	0.340 (0.474)	0.379 (0.485)
High School/GED	0.266 (0.442)	0.160 (0.367)	0.229 (0.420)	0.237 (0.425)	0.194 (0.395)
Less than High School	0.0743 (0.262)	0.0193 (0.138)	0.0185 (0.135)	0.0375 (0.190)	0.0363 (0.187)
Observations	797726	72417	14058	2306	907

Notes: Population-weighted mean coefficients and standard deviations (in parentheses). Population weights (perwt) computed by U.S. Census Bureau (see https://usa.ipums.org/usa-action/variables/PER-WT#description_section). Also see <https://usa.ipums.org/usa/sampdesc.shtml#us2020a> for a description of 2020 COVID-19 sampling scheme.

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If we compare the ACS findings to existing survey data on the members of the profession (Adona et al. 2019; Gronke, Manson, and Lee 2019; 2020; Gronke, Manson, and Crawford 2018; Mason, Adona, and Gronke 2020), we see some similarities and differences. The election administration workforce appears to mirror the larger public administration workforce (PA) and PA office administration (OA) workforce with respect to race, ethnicity, and gender. However, there are some notable differences. Overall, the election administration workforce nationally appears to be older than the national PA or OA workforce, and the election administration workforce overall appears to have more employees with a bachelor's degree or higher than the PA or OA workforce. However, the salary comparison between the election administration and PA workforce appears to be about equivalent, but it is higher on average as reported than the OA workforce.

The majority of local election office leaders are elected (Adona et al. 2019; Kimball and Kropf 2006), although methods of selection vary by state. How compensation of elected officials compares to those appointed has not been the subject of systematic study. Basic categories of selection methods are known (partisan vs. nonpartisan election, appointment by various state-wide executives and various boards) (Hale, Montjoy and Brown 2015; Hale and Brown 2024), however, a comprehensive census has not been conducted (but see original data from Ferrer and Geyn 2023).

Demographic data are unavailable for the vast majority of the nation's election administration office staff, who are civil servants and hired through typical county and municipal and state hiring processes. Research demonstrates long-term negative impacts of segregation on Black civil servants (reduced earnings and opportunities for advancement, diminished returns on education and experience, lower entry salary levels and increased exits among higher-earning Black civil servants) (e.g., Aneja and Xu 2022); however this area has not been the subject of systematic study, nor is there research tied to election administrator salaries or that study salary differences by gender or race.

FUNCTIONS

Broad and different groupings of functions and organizational arrangements are known to exist around the country (Adona et al. 2019; Burden et al. 2013; Gronke et al. 2023; Hale, Montjoy, and Brown 2015). Some offices are entirely devoted to election administration and/or voter registration, some offices take on other functions in addition to one or both of these

primary functions,⁵ and some bifurcate the process across multiple offices. Despite variations in state laws and in the configuration of responsibilities of local offices, election administrative sub-systems are largely the same across the states and territories: most people register in advance, candidates are qualified and ballots are prepared, ballots are delivered in some fashion to voters, voters make selections and cast ballots, and those ballots are counted. Generalization beyond the single unifying factor of local (or state) government is limited. Related, the extant literature focuses almost exclusively on three groups of employees: 1) state chief election office leaders including state election officials and secretaries of state; 2) local election office leaders (LEOs, which are sometimes conflated with all local election office staff); and 3) poll workers.

There has been no systematic study of election office positions, so we engaged in a quick examination of 52 recent position listings from 25 states plus the District of Columbia. We collected the job ads from the Election Center⁶ jobs board, positions listed in electionline, and through a search of Google jobs. Our cursory examination yielded several hypotheses that may deserve more systematic study:

Across the country, there are titles that are similar and mean the same thing OR mean different things, and there are different titles to encapsulate the same kinds of work

- » There are regional similarities in titles
- » Election office titles and scope of work reflect those of other municipal positions, which generally reflect region and culture and are part of long-standing traditions
- » There are similarities in title and scope of work for unionized versus non-unionized workforces

Size of jurisdiction is a better indicator of the type of work a position is responsible for than state or region (i.e., in small jurisdictions, responsibilities are broader than in large jurisdictions, which can specialize).

- » Qualifications for the same position will systematically vary by size of jurisdiction

5 Election administrators may be housed in offices as diverse as county clerk, recorder, controller, auditor and assessor (Hale, Montjoy, and Brown 2015; Hale and Brown 2024).

6 The Election Center is the National Association of Election Officials and the national professional association dedicated to the field of election administration.

Election administration functions are also supported in many states by state associations of government officials (formal and informal) that exist to provide mutual support, education and training for members. Members follow the profile of the local office that houses the election function; for example, the Colorado Clerks Association has as its member the county clerks and their staffs who are the local government employees who conduct elections, and the Florida Supervisors of Elections consists of the supervisors of elections and relevant staff (Hale and Brown forthcoming). There is no definitive census of state associations of election officials across the country.

METHODS OF SELECTION

There is substantial variation across and within states as to the selection methods used to choose local election office leaders, and multiple approaches to classifying and describing these differences; some are selected via direct elections (partisan or nonpartisan); others are appointed by statewide executives (governors or secretaries of state) or other appointing authorities. The majority are elected although geography influences this (Kimball and Kropf 2006; Hale, Montjoy, and Brown, 2015; Hale and Brown 2024; Ferrer, Geyn, and Thompson 2023).

In their original dataset published July 19, 2023, Ferrer, Geyn, and Thompson provide new granularity through data on 5,880 clerk elections in 1,313 counties from 1998-2018. It is beyond the scope of this report to detail the extensive findings; however, two points merit mention: 1) the method of selection also varies within 29 states, with variation most likely in the largest jurisdiction; and 2) local nonpartisan election administration is most common when control is vested in the municipal rather than the county level.

Perhaps more important, Ferrer, Geyn, and Thompson (2023) argue based on their new dataset that there is little evidence that partisan election administrators elected on a partisan basis are systematically administering elections differently. The normative argument from prior studies that direct election and/or partisanship of election offices is connected to ideology and preferences about election policy (i.e., the connection influences their exercise of discretion, which has been viewed with suspicion in multiple studies). Prior studies have linked differences in choices about election administration practice, or partisan preferences about various approaches, to partisan membership of election officials and/or to whether they were directly elected, including policy views in general (Kimball et al. 2013; Burden et al. 2013); administration of pro-

visional ballots (Kimball, Kropf, and Battles 2006; Kropf, Vercellotti, and Kimball 2012); approaches to facilitating turnout (Burden et al. 2013); voter communication strategies (Anthony et al. 2021; Porter and Rogowski 2018; White, Nathan and Faller 2015); and list maintenance (Stuart 2004); however, these studies are difficult to synthesize given their different approaches to design and inconclusive or null findings on some aspects. One study of the actions of county governments in election administration (McBrayer, William, and Eckelman 2020) finds no partisan effects of various county-level decisions made those with supporting responsibilities for election operations (for a similar finding see Shepherd et al. (2021) on poll site siting practices). Emerging research suggests that partisan identification of local election officials may impact public perception of them (Anthony et al. 2021; Manion et al. 2021); more research may be needed in this area particularly given the political climate since 2020.

DIFFERING ARRANGEMENTS AND PROCESSES

The election administration workforce also includes a non-FTE workforce. Non-FTE workers do not appear to be distinguished in extant research and may be simply lumped in with poll workers; in fact there is significant variance around the country in categories of non-FTE workers, what they are allowed to do, and the employment practices used to select them. In short, an office may be staffed by a combination of year-round full-time employees (and these may be elected, appointed, or career), year-round part-time employees, seasonal employees or temporary workers (some hired by the jurisdiction and some brought in through temporary employment agencies), contractors, seasonal employees, interns, and then finally short-term workers whom we often think of as poll workers. From a human resources perspective, how these people are in-processed may be different. From a functional perspective, where these people work across the election administration sub-systems also differs.

There is no extant literature that captures non-FTE data or these dynamics, so we reached out to election officials in several states around the country, each with different approaches to election administration (all mail voting, precinct voting and early voting, precinct voting and absentee allowances). The combination of type of worker (employment category) and work functions appears to extend beyond the simple staff/poll worker dichotomy. One jurisdiction differentiated between poll workers who work on election day versus office workers who either work year-round or are temporary or are interns, but only office workers (regardless of category) are allowed to work with early voting. Contrast this to another jurisdiction in a different state which uses only two categories of employees: full time employees

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(FTEs) and election judges. However, within the election judge category there is significant variation in functions, pay, and hours worked in what are typically considered “poll worker” roles; some provide technical IT support, some are trainers, and some process ballots, and further distinction is drawn between students and regular election judges.

Vetting, on-boarding, and supervision also differ by type of worker. One jurisdiction differentiates between seasonal employees who go through full on boarding and background checks but are part-time and thus are limited to some office functions but not others. At the same time, this jurisdiction hires technical experts essentially as long-term poll workers earning a standard stipend per day without background checks or onboarding, and these personnel work at vote centers but are differentiated from seasonal employees who hold management positions at the vote centers and who do go through background checks.

An example of this variation is presented in Table 2. The sub-systems across which people may work are grouped in

broad categories that reflect major administrative functions and stages of US elections (see column 1). Across these categories, jurisdictions are compared in terms of the functional areas in which non-FTEs are utilized. Note that the category of “special ballots” includes a variety of functions like processing UOCAVA ballots, ballots for nursing homes or other similar facilities, emergency ballots, and so on. Jurisdiction 1 is in a state with jurisdiction-based voting and early voting. Jurisdiction 2 is a state with only mail balloting. Jurisdiction 3 has only recently moved to mail voting but maintains vote centers for those voters who prefer to vote in person. Jurisdiction 4 has precinct voting with absentee voting by mail only.⁷

⁷ More than one of the election officials with whom we spoke noted that within their state there are differences across the jurisdictions in the types of non-FTE employees and the tasks that they perform. In addition, these states varied on whether and to what extent any of these classifications are framed by law or custom.

Table 2. Examples of Non-FTE Workforce Variations in the US Election Administration Workforce

	Jurisdiction 1	Jurisdiction 2	Jurisdiction 3	Jurisdiction 4
Administrative Function				
Management				
IT		X		
Training		X		
Other				
Pre-Balloting				
Registration		X	X	
Equipment				
Ballots				
Voting Sites		X		
Early Voting	X			
Mail Voting		X	X	
Special Ballots		X	X	
Balloting				
Eligibility Check	X	X	X	
Receive/Process	X	X	X	
Provisionals	X	X	X	
Post-Balloting				
Counting			X	
Re-counts			X	
Audits				
Certification				

Source: Hale and Brown 2024

POLLWORKERS

Poll workers are typically not full-time election workers or employees of election offices; they are recruited and trained to assist in the voting process during an election and are the typical interface for voters who cast votes in person. Typical poll worker activities include verifying the identities of those who come to vote, assisting voters with signing documents required to cast a ballot, providing ballots and setting up voting equipment, managing voter flow into and through the poll site, and performing other functions as dictated by the state or local election authority including accessibility and language assistance.

Data collected by the US Election Assistance Commission (EAC) through its voluntary Election Administration and Voting Survey (EAVS) include the number of poll workers deployed, age of poll workers, and ease of recruiting poll workers (EAC 2022).⁸ In 2022, states reported 181,790 precincts and 94,793 physical poll sites at which 64,219,101 poll workers assisted voters with in-person early and Election Day (EAVS 2022). The composition of poll workers typically trends older; despite the noticeable shift in the age distribution of poll workers from 2016 to 2020,⁹ age distribution in 2022 returned to 2018 levels; in 2022, 31% of poll workers were aged 61-70, and 26 % were aged 71 or older. EAVS data (2022) indicate that the difficulty in recruiting poll workers has not disappeared but has declined since 2018; more than 15% of poll workers in 2022 were serving for the first time. Reported challenges include pay, hours, and locations of service.

⁸ See, e.g., https://www.eac.gov/sites/default/files/2023-06/2022_EAVS_Report_508c.pdf

⁹ During this period the percentage of poll workers ages 18 to 25 and 26 to 40 increased, and the percentage of poll workers ages 61 to 70 and 71 and older decreased.

TRAINING, CREDENTIALING, AND OTHER PROFESSIONALIZATION

This section summarizes various literatures related to training in election administration, including training of permanent employees and as well as the part-time and/or temporary workforce, which we refer to here as poll workers.¹⁰ The field of election administration is only recently recognized as a profession among the fields of expertise in public administration and public service (Hale, Montjoy, and Brown 2015; Hale and Brown 2020). From the earliest assessments of the field nearly 100 years ago (Harris 1928; 1929; 1934) the field is observed as distinct from other areas of local civil service because of historic forces of decentralization, localism, and a patchwork of local, state, and federal rules combined with lack of significant intergovernmental oversight (Ewald 2009; Keyssar 2009; Montjoy 2008). These forces may contribute to what is happening in the training environment, but that has not been a topic of systematic study.

Systematic approaches to training, credentialing, and other forms of professionalization have emerged over the past 40 years and include training and certification at the national and state levels, as well as numerous opportunities to gather resources and transfer knowledge both generally and in curated forms of information such as professional or best practices (Hale and Brown 2020). Training initiatives targeted at election office staff include national training programs, certification and credentialing programs, and state-based training programs connected to state associations of election officials or state election offices. The field also places significant emphasis on training temporary poll workers. All of these efforts engage principles of pedagogy, and evaluation of success. The section below begins with a discussion of adult learning principles, and proceeds to consider approaches to training, certification, and other professionalization efforts for election office staff, and subsequently for poll workers as the most common category of the part-time and/or seasonal (non-FTE) election administration workforce.

PEDAGOGY AND ADULT LEARNING¹¹

¹⁰ Part time, temporary, and seasonal workers are known by many titles; here we summarize these as poll workers; however, non-FTE information presented in this report suggests that “poll worker” data may not capture the same workers or conditions across jurisdictions.

¹¹ Literature on adult learning is vast; this report

Training is more than just showing someone how and when to check a box or push a button; in its essence training is a form of adult education. The most common approaches to training start with 1) developing learning objectives across relevant knowledge, skills, attitudes, and abilities; 2) creating measurable observable behaviors and/or outputs to demonstrate attainment of one or more learning objectives;¹² (3) developing an approach to material delivery (subject-based versus thematic), 4) breaking down material into units or modules, 5) selecting method(s) of delivery, and 6) evaluation. The approaches taken within these broad steps are greatly influenced by the theory of learning that trainers adhere to. Most also apply characteristics of adult learners and their motivations and specific needs (Masalimova et al 2016; Smith 2017; Taylor, Trumpower, and Purse 2015; Wahlgren 2016).

Adult learners present particular characteristics by virtue of prior experience. They draw on earlier education and practical experience, often believing they understand how things work. When faced with inconsistencies or disconfirming evidence, they must re-learn, which can be difficult when “knowledge” is entrenched. Re-learning requires time, authority, reinforcement, feedback, motivation, information presented in a clear way, the use of peers, active learning, and information packaged in such a way that it can be remembered easily.¹³ The application to election administration is clear—laws, practices, and even technology change regularly, and conflicts occur when people do not want to change.

Adult learners are developmentally and intellectually distinct from child or youth learners. As essentially voluntary learners, adults are more intrinsically motivated but often experience other pressures that make learning more difficult. This tension creates a gap that adult learners have to navigate, which depends on the balance between the resources available and the resources needed and affects the learner’s capacity for learning (McClusky 1963).

Different approaches to learning in general also add complexity; among these are pedagogy, androgogy, experiential learning, learning styles, and interac-

tions with technology. In terms of the art and science of teaching, androgogy is often positioned as a preferred approach for adult learning (Bear 2012; Merriam 2017). Contrasted to pedagogy,¹⁴ androgogy is a humanist learning theory centered around a learner constructed contract. Androgogy positions the adult learner in the center of the learning experience, and focuses content on what an individual needs as a life-long learner (Jarvis 2014; Knowles et al. 2011; Lauwers 2019). From the perspective of motivation and environment, however, training in election administration is perhaps more appropriately guided by a pedagogy approach, as public service training is often mandated (thus an external locus of control), and government efficiencies require that the learning environment lend itself more towards a formal approach. Participatory learning (or experiential learning) centers adults as in a learning cycle (experimentation, experience, reflection, conceptualization, back to experimentation) challenges the norm that learning mostly occurs in formal environments such as classrooms, and replaces it with the notion that “all learning is the result of experience, no matter where it occurs” (Bouchard 2001, 177). For adult learners, participatory learning where they are centered as experts can be particularly impactful (Ernst 2019).

Adults may also have subjective preferences for certain learning approaches to others. Often discussed as “learning styles” (Chuang et al. 2021; El-Bishouty et al 2019; Gulbahar and Ayfer 2004; Kelly 2013; Knoll et al. 2017; Lehman 2019; Sims and Sims 1995; among myriad others), the basic concept is that people differ in the channels and approaches to learning that they prefer including preferences or dislikes regarding trial and error, structured lessons, lectures, readings, multi-media, structured assignments, hands-on activities, drills, and various methods of self-assessment. Variants of this thread are the multiple intelligences inventories, which break learners into multiple domains (cognitive, physical, and affective), and apply these domains across a variety of skills and abilities (e.g., Gardner 1983).¹⁵

presents top-line points that may be relevant to the election administration workforce.

12 Following a hierarchical taxonomy used widely and deeply embedded across US education to tie learning to methods of cognition (Anderson and Krathwohl 2001).

13 Drawn on Piaget earlier theory of constructivist learning (Ultanir 2012).

14 Literally, the art and science of teaching children, and the didactic, teacher-directed learning approach that is dominant in American instruction at all levels.

15 Critics of learning preference approaches assert that people can learn in different ways despite their personal preferences and that the enterprise is subject to confirmation bias (Newton 2015).

Technology also impacts the current adult learning environment. Although ample research exists about learning styles in the in-person learning environment and comparisons to the online experience (e.g., El-Bishouty et al. 2019; Gulbahar and Alper 2004; Huang, Chen, and Hsu 2019), a few particular approaches are worth noting (Gudiracla 2017). These include just-in-time personalized learning, U-learning/AR learning, game-based learning, and other simulation approaches. Just-in-time personalized learning engages learning analytics with structured and unstructured data to create personalized learning experiences, and presents content multiple times in multiple ways to enhance learning. U-learning (ubiquitous learning) uses augmented reality (AR) technology to create online “authentic learning activities” (i.e., actually learning and doing things) to simulate and personalize training that would otherwise depend on fieldwork (Gudivada 2017; Li and Gu 2023). These tools are also linked to forms of artificial intelligence such as intelligent tutors and virtual learning partners that create tailored, individualized, adaptive learning systems (Li and Gu 2023; Li, He, and Xue 2021), game-based learning, and simulations to enhance learning, many of which have modified applications for learning styles (El-Bishouty et al. 2019; Gulbahar and Alper 2004; Huang, Chen, and Hsu 2019).

A downside of digital learning is that not all students prefer the online format. Some research based on worldwide movements to online learning suggests differential impacts related to individual self-efficacy, attitudes towards digital learning, and other characteristics like innovativeness (e.g., Hong et al. 2022). This suggests that, where possible, multiple pathways to learning for election officials is preferable, with digital approaches as one of many options, especially for adult learners who bring tangible experience to the training they need or who bring other needs, such as low literacy (Lear et al. 2019; Masalimova et al. 2016; Ratnasari, Chou, and Huang 2023; Storvang et al. 2020; Talbert et al. 2022; Taylor, Trumpower, and Purse 2015; Wahlgren 2016).

Throughout all training and adult education are principles of materials and tools design that include language, visual structure, and ease of the visual or physical process of accessing information, interacting with it, and performing tasks more intuitively (e.g., Lidwell, Holden, Butler 2003; Martin and Hanington 2012). Attention to how audiences will utilize the information (Garland 1993; Kinross 1994; Larson and Sheedy 2008; Papanek 1971); site and page configuration (Lidwell, Holden, Butler 2003.); use of hierarchical formats (Stiff, 1996) and typographic principles (Hochuli 2004;

2008; Warde 1956) may all be related to efficacy. Broad design principles abound (e.g., Norman 2013 generally; Quesenbery and Horton 2014 web accessibility). However, no literature reflects an assessment of training material design in the election administration field.

Finally, training for interaction in public service generally, and in election administration specifically, also means being attuned to differences in people and requires development of strategies for attending to differences in background, education, language, motivation, and cognitive strengths and learning preferences. In the election arena, attending to voters with disabilities is a continuing challenge (Crews and Campbell 2004; US Election Assistance Commission 2022; US Government Accountability Office 2009). Federal laws including the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, and federal election laws including the Voting Rights Act of 1965 and the Help America Vote Act of 2002 (HAVA) prompt specific on the job training in these areas, centered around the use of accessible voting machines and etiquette (e.g., Terry et al. 2019a; Terry et al. 2019b; EAC 2022), which is based on research of the experiences of voters with disabilities (Schur, Adya, and Ameri 2015; Schur, Ameri, and Adya 2017; Schur et al. 2002). In election administration, attention to diversity, equity and inclusion is essential (King and Barnes 2018; Lee et al. 2011; White, Nathan, and Fallor 2015; Yeo and Jeon 2023) but training in this area appears to be voluntary.

The consensus of adult education is that teaching and training adults in the field should be designed and delivered in multiple modalities, and training materials should be accessible in multiple ways. Further, the meaning of understanding something “well” should be both conveyed and demonstrated, and adult learners should be provided with opportunities to demonstrate their own knowledge and understanding.

Moreover, across all learning modalities, external evaluation is necessary to ensure that the learner’s knowledge, skills, and abilities will allow them to effectively engage in the work required. Methods vary widely including self-reflection of abilities or knowledge gained, traditional testing, or demonstrations, and may be written, digital, verbal, or physical (e.g., Dagilyte and Coe 2019; Havemann et al. 2023; Li and Gu 2023; Marineau 1999).

NATIONAL, STATE-BASED, AND INTERNATIONAL TRAINING PROGRAMS

As there is no specific, systematic Science of Teaching and Learning (SoTL) literature about how to teach and train election officials, and our inferences are drawn from practices in other fields. Training and certification of KSAs critical components of ensuring various principles of good government and public service, including adherence to law and ethical precepts, effective as well as consistent application and service, and efficiencies in service delivery. It is also a critical aspect of the professionalization of any field.

Training and credentialing efforts in the election administration field track the evolution of the field as a recognized body of expertise and as the architecture of the field has become more highly articulated (Hale and Brown 2020). No research exists that comprehen-

sively captures and analyzes election administration training programs and requirements across the states, either for election office staff or poll workers. Training (and in some cases, credentialed training or certification) is provided by state election offices, national membership organizations, state and national associations of government employees that include those responsible for elections, and national government agencies. Many organizations are active in the election administration space; to consider what training might mean across these organizations, we use the concept of information diffusion (Hale 2011; Mossberger 2000) to capture various ways that election officials might gain information and learn, in addition to a formalized training session.

Table 3. Organizations Engaged in Training for Election Officials

Organization Name	Information Exchange¹⁶	KSA-based Training¹⁷	Credentialed Certification
Bipartisan Policy Center	X		
Brennan Center for Law and Justice	X		
Center for Tech and Civic Life	X		
Federal Voting Assistance Program	X		
Election Assistance Commission	X	X	
Election Community Network	X		
Election Group	X	X	
National Association of Election Officials/Election Center	X	X	X
National Association of Secretaries of State	X		
National Association of State Election Directors	X		
State associations of election officials	X	X	X
State election offices	X	X	X

Source: Hale and Brown 2024

16 Information diffusion encompasses curating, packaging, synthesis, and transfer of knowledge through various forms of information networks (Hale 2011; Hale and Brown 2016; Mossberger 2000).

17 KSAs stand for the collection of established knowledge, skills, ability, and attitudes attributable to learning and are standard curricular building blocks.

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

National organizations of public officials who serve in various levels of government also provide information and resources about election operations (e.g., International Association of Government Officials, National Association of Counties, National Association of Governors, National Conference of State Legislatures, among others). Table 3 is limited to groups with efforts directed primarily and/or significantly at election administration issues.

Election administration functions are supported in many states by state associations of government officials. These associations exist to provide mutual support, education and training for members; some are formally organized, and some are informal groups. Members follow the profile of the local office that houses the election function; for example, the Colorado Clerks Association has as its members the county clerks and their staffs who are the local government employees who conduct elections (among other responsibilities), and the members of the Florida Supervisors of Elections are the county supervisors of elections and relevant staff.

Using available resources from the National Conference of State Legislatures (NCSL), electionline, the National Association of Secretaries of State (NASS), the National Association of State Election Directors (NASED), and the International Association of Government Officials (IAGO) that indicate that states and territories had statutory requirements for training, we compiled information to indicate which states offered

election administration training from the state, which had state-based certifications, and which had training and certification through state election associations. Our findings are summarized in Table 4. Note, however, that making this determination for some states is particularly difficult because of multiple offices in the state that run elections and differing requirements for different offices.¹⁸

In short, across the states and territories, as in all other aspects of election administration, there is significant variance in training requirements. Half of the states and territories have statutory requirements, and half do not. This is similar for training as mandated from the state chief election official (not that these are not mutually exclusive). Further, some states offer training through state associations even if not required by the legislature or chief election official of the state. Existing training is offered in a variety of different ways—through state staff, through university-based programs, and through association programs that bring in experts to provide the training.

¹⁸ For example, elections in Alabama are largely run through the office of the county probate judge and sometimes through the county clerks; however, the voter registrar board is separately appointed and operated, and other local offices are also involved in election administration in various ways. Although the voter registrars have required training, the other offices do not, and so Alabama is counted as a no.

Table 4. Summary of Election Official State-Level Training Across the States and Territories

	Training Legisla- tively Mandated	Training State Office Man- dated	State Certification Available	Association Train- ing & Certification
				Certification 17
Yes	27	28	13	Train/~ Cert 6
Unclear/DK	1	6	36	11
No	28	22	7	22

N=56; Source: Hale and Brown 2024

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

In addition to state certification, the National Association of Election Officials (the Election Center), in partnership with MPA Program faculty at Auburn University, established certification in election administration and voter registration for Election Center members including election officials and service providers in the field. The program is a blend of public administration and public service principles including ethics; systems principles; management and leadership; strategic planning and budgeting; communications; election information, technology and security; voter participation; implementing new programs; and several courses in election law, history, and policy. Completion earns continuing education credit from Auburn University and graduate credit in Auburn's Graduate Certificate in Election Administration. Courses are offered online and in person. There are currently approximately 1,500 Certified Election and Voter Registration Administrators across 45 states, plus the District of Columbia, Guam, Virgin Islands, and the Northern Mariana Islands.

The US Election Assistance Commission has online training modules and is currently planning a large national training program. The Elections Group, LLC, also offers training materials and has posted on its website a guide to creating a training manual (www.electionsgroup.com). The Election Center CERA/CERV program offers train the trainer courses and advanced courses for certificate renewal as well.

The training of election officials in other countries is organized in various models. The most typical is a top-down system where the electoral management board (EMB) runs a training program that distributed to subordinate units. In terms of sheer size, a good comparison country is India, which hosts a significant population but in contrast to the US is highly centralized. The Election Commission of India (ECI) puts out training materials for all election officials in the country, and includes topics like postal ballots, disabled voting assistance, poll day arrangements, and so on.¹⁹

Alternatively, some countries turn to the non-profit sector for training. For example, in the United Kingdom (UK), the Association of Electoral Administrators runs a training program for election officials that includes a combination of KSAs that include public management principles and skills (e.g., management, human resources, and budgets) and specific functions in their electoral system (processing absentee voter re-

quests, verification and counting, etc.)²⁰ In this way, the UK program looks like a combination of the US-based CERA certification plus state-based training (whether through an association or the state office). The UK program also includes an advanced credentialing requiring a thesis. Another approach comes from the Organization of American States works with an organization that utilizes a version of the International Organization of Standardization (ISO) 9001 standards to provide credentialing election officials and their training program includes training on voter registration, registration of political organizations and candidates, electoral logistics, vote casting, vote counting and declaration of results, electoral education, oversight of campaign finance, and resolution of electoral disputes.²¹

In addition to these existing programs, there are other organizations that provide tailored election administration training content around the world. Among them are the International Foundation of Election Systems (IFES), the Electoral Integrity Project (though their training is university-degree based and focused on public policy and management), and the Organization for Economic Cooperation and Development (OECD) (for example, they have a tailored training program for political finance regulation for Greece). A range of other international organizations also offer election observation training (e.g., the Carter Center, the Global Network of Domestic Election Monitors (GNDEM), the United Nations (UN), the Organization for Security and Co-operation in Europe (OSCE)). Most groups engaged in this are signatories of the "Declaration of Global Principles for Non-partisan Election Observation and Monitoring by Citizen Organizations" and the "Code of Conduct for Non-Partisan Citizen Election Observers and Monitors" developed by GNDEM.

OTHER PROFESSIONALIZATION

In addition to formal training and certification, three threads of professionalization are apparent in the election administration field. These include university-based education, professional practices that inform the field, and measurement approaches. Professionalization refers to the institutionalization of an established body of knowledge, skills, abilities, and ethical

¹⁹ For more information or to see examples, see <https://www.ceodelhi.gov.in/TrainingMaterialn.aspx>.

²⁰ For more information, see <https://www.aea-elections.co.uk/training-qualifications/training-courses/course-details/>.

²¹ For more information, see [https://webstore.ansi.org/preview-pages/ISO/preview_ISO+TS+54001-2019\[S\].pdf](https://webstore.ansi.org/preview-pages/ISO/preview_ISO+TS+54001-2019[S].pdf).

norms along with pathways to skill building, and curriculum to support educational attainment, and professional credentialing (Berman 2006; Hale 2011; Klinger and Nalbandian 2008; Rainey and Steinbauer 1999). Although generally the professionalization of a field brings about more positive results (expertise, competence, efficiencies, transparency, accountability, etc.) than negative ones (divided loyalties, decreased communication, silo-ing, etc.), the general consensus is that professionalization of a field brings greater credibility (Brown and Hale 2019; Hale 2011; Hale and Brown 2013; 2020; Hale, Montjoy, and Brown 2015; Wilson 1991). This positive aspect of professionalization has been sorely challenged over the last several election cycles from mis- and dis-information, and in this way election administration continues to defy trends associated with other parts of the civil service. Professional curricula and other forms of curated information promote learning and innovation, build professional community, and enhance professionalization as part of the body of knowledge of a profession as agreed by professionals and the broader stakeholder community (Freidson 2001; Hale 2011; Hale and Brown 2016; Radin 2006). Professionalization of a field also tends to be associated with the development of various interest, advocacy, and professional organizations, and these patterns have played out for election administration as they do for other fields (Costain and McFarland 1998). Perhaps important to note in the study of this field, civil service itself is perhaps the earliest form of generalized professionalization in public administration (Aneja and Xu 2022); Moreira and Pérez (2021).

Embedded in professionalization is measurement, and the field has undergone significant efforts at measurement in the last 20 years. This began with HAVA and its requirement that the EAC report to Congress, which has been accomplished, at least in part, through the EAVS which captures election output data across the states and jurisdictions, as well as policy information. After the EAVS, the Survey of the Performance of American Elections (SPAЕ) was launched to capture information about the voter experience (some of which is also captured in the American National Election Survey (ANES) which significantly pre-dates both of these efforts) (Stewart 2023).

The SPAЕ was complemented simultaneously by the Democracy Index (Gerken 2009) which attempted to gauge how well states (as aggregates of local jurisdictions) were performing with respect to registration, balloting, and counting. This was followed by the Election Performance Index (EPI) which was built on the Democracy Index and expanded to examine other aspects of election administration (Stewart 2018). Both

efforts were criticized because the measures were used to “grade” the efforts of states on the performance of election offices but also included measures outside of the control of election officials (e.g., voter behavior). Various efforts have been developed to expand on this (for example, the Election Administration Professionalization Index (Hale and Brown 2020), though none have yet been able to effectively drill down to fully capture local capacity and performance. Various other nuanced studies designed to capture aspects of election administration accuracy and efficiency have also been created, for example the Stewart/BPC efforts at capturing voting line information.²²

UNIVERSITY-BASED EDUCATION

Two university-based educational programs support the field. One is the Graduate Certificate in Election Administration at Auburn University, which is adjacent to its MPA Program. The other is the certificate offered at the University of Minnesota. Ad hoc course offerings exist in institutions across the country. In 2015, a systematic effort to identify and link such courses to degree-granting programs was initiated by scholars engaged in the field through NASPAA, the Network of Schools of Public Policy, Affairs, and Administration²³ through creation of an organized committee on election administration.²⁴ The effort resulted in an information commons for informing MPA/MPP students of opportunities to take elective courses in election administration at institutions outside their home programs, and a sample curriculum for designing a program in election administration.²⁵ The most recent version of this list (2020) is presented in Appendix A, and includes NASPAA institutions who either were interested in participating in the commons, their

22 <https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2018/04/Improving-The-Voter-Experience-Reducing-Polling-Place-Wait-Times-by-Measuring-Lines-and-Managing-Polling-Place-Resources.pdf>; <https://bipartisanpolicy.org/report/the-2018-voting-experience/>

23 NASPAA administers accreditation for higher education programs in public administration, public affairs, and public policy.

24 Dr. Kathleen Hale (Auburn University) was among the founding members of the group and its first chair, followed in that role by Doug Chapin and Dr. Thessalia (Lia) Merivaki (Mississippi State University).

25 See, <https://www.naspaa.org/resources/initiatives/naspaa-civic-engagement/election-administration-commons>.

degree program(s), curriculum, course names, frequency of rotation, and mode of delivery.

“BEST” PRACTICES²⁶

The development and dissemination of professional practices as a technique for information dissemination and the spread of innovations for election officials began in the 1990s with general government awards through the International Association of Clerks, Records, Election Officials, and Treasurers (IACREOT, now known as the International Association of Government Officials, or IAGO). The concept was adopted by the Federal Elections Commission and its National Clearinghouse for Information on the Administration of Elections as the precursor to today’s US Election Assistance Commission established by the HAVA in 2002; in 1996, around the same time, the Election Center (National Association of Election Officials) established awards for Professional Practices Papers

Early criteria for selection for Election Center awards included new or innovative ways to serve the public that could be adapted by other jurisdictions. The Election Center began their awards program to lift up the voice of election officials guided by the philosophy that practicing election officials should judge the work of other election officials from a non-partisan lens. Part of the motivation for Election Center program was to serve as a foil to partisan groups trying to encourage practices that advocates believed would lead to outcomes favoring one party over another.²⁷ More recently, awards have been made for initiatives that exemplify outstanding practices, innovation, partnerships, use of technology, principled practice, innovation in election security, quick and/or inexpensive ideas, and state office innovation. Current selection criteria include goodness of fit in one of these categories, practices in place in the office during the year they are submitted, and whether the practice is generalizable and adaptable to other election offices. Winners are (still) selected by practicing election officials.²⁸

26 Best practices as an official, government designation connotes a procedure that is generalizable and adaptable based on scientific standards (see., e.g., various examples at www.nist.gov).

27 From personal communication with and papers of Doug Lewis (August 2023), retired Executive Director of the Election Center/National Association of Election Officials.

28 For more information see www.electioncenter.org; a review of the applications over the past 15 years by local jurisdiction or state office shows a strong correlation with the Election Administration Professionalization Index (Hale

In 2016, the US Election Assistance Commission (EAC) began a similar awards program, their Clearies, as a part of its clearinghouse function. Today the EAC confers seven awards a year in the categories of election modernization, state association work, accessibility, innovations, poll workers, “I Voted” stickers, and cyber and technology. Selection criteria are based on six criteria: innovation, sustainability, outreach, cost-effectiveness, replicability, and results. What is not clear is whether selection is made on the basis of a systematic evidence base presented by the applicants or if the selection committee uses more of a “face” validity approach to determining aspects like cost-effectiveness, replicability, and assessment of results. Recent Clearie winners also show a strong correlation with the Election Administration Professionalization Index (Hale and Brown 2020). The EAC refers to the Clearies as best practices; the Election Center awards are purposefully referred to as professional practices and are guided by the principle of peer-practitioner recognition and acknowledgement of utility.

POLL WORKER TRAINING²⁹

Ensuring that polling locations are managed by an adequate number of highly trained seasonal staff is critical to ensure that eligible voters who choose to cast a ballot in person are not only able to do so but also confident in the processes that structure election administration and the political outcomes they generate (Burden and Milyo, 2015; King, 2017).

Observed to exemplify the “street level bureaucrat,” poll workers use discretion to implement policies in polling locations that affect who can cast a ballot, how a ballot is cast, and how voters experience in-person voting (Lipsky 1980; Kimball and Kropf 2006; Wilder and Garber 2021). Poll worker training is widely recommended to address statutory compliance and areas of discretion (e.g., Alvarez and Hall 2006; Burden and Milyo 2015; Hall, Monson, and Patterson 2009; Jones and Stein 2021). Studies associate training with voter confidence across various stages of the process including identification and registration, poll site management, equipment use, and special circumstances such as provisional balloting (Atkeson et al. 2014; Atkeson and Saunders 2007; Burden and Milyo 2015; Claassen

and Brown 2020).

29 This report recognizes the diversity of positions held by part time, temporary, or seasonal staff in election offices. This section is limited to a discussion of poll workers as no literature examines other categories of non-FTE workers.

et al. 2013; Hall, Monson, and Patterson 2009; Jones and Stein 2021; King, 2017). Poll worker error (whether linked to training or not) has been observed to create a burden for voters (Watts 2014). Recently, poll worker training has been associated with election security (e.g., Gordon and Orey 2022). Racial composition of poll workers in a poll site may affect the voter experience for voters of races different than that of the pollworker (King and Barnes 2019); moreover, implicit bias may result in differential treatment regardless of whether discretion is *de jure* or *de facto* (see., e.g., Page and Pitts 2015).

Although the details vary across the states, the majority of states (42 plus the District of Columbia) require poll worker training through state law (Gordon and Orey 2022; EAC 2007; 2020). Although poll worker training is a security concern (2022, 3), no comprehensive directory has been compiled of poll worker training curricula, course design, methods of instruction, or methods of assessment. In some jurisdictions, poll worker training is mandatory for each election; in others, training is deemed sufficient for a period of time such as a calendar year which encompasses multiple elections (EAC 2020). In many instances, state election offices provide training materials in total or in part.

Research on training practices and challenges for this population is extremely limited (Burden and Milyo 2015); there are no reports of systematic analysis to assess effectiveness of content or method of delivery, although anecdotal evidence and experience suggest that some form of assessment is used. Challenges to training have been observed including the relatively episodic and infrequent nature of in person voting, changes in law and practice,³⁰ and changes in technology (Favreau and Hanks 2016; Watts 2014); one study finds that hands-on training reduces the residual vote rate (Glaser et al. 2007).³¹ No body of research captures the extent, nature, or effect of vendor-provided training, although anecdotal evidence and experience suggest that providers of voting systems and

election-adjacent technology (e.g., poll pads, ballot on demand printer systems) also design and/or conduct workforce training for their products.

WORKFORCE DEVELOPMENT

TECHNOLOGY

The integration of electronic voting systems into the election process, particularly since HAVA, is arguably a key driver for the professionalization of election workers in the United States. Newer technologies often require a higher level of expertise which may drive demand for more educated and skilled labor (e.g., Goldin and Katz 2009). The professionalization process includes not just the development of technical skills but also a broader understanding of the complex logistical, legal, and ethical aspects of running transparent and accurate elections.

ATTRITION

Since 2020, limited analysis indicates a significant number of election officials—as many as 1 in 5—(Benenson Strategy Group/Brennan Center for Justice 2023) will soon be leaving the field in greater than expected numbers. at least in part due to the contentious nature of working with the public and concerns for personal safety (Edlin and Norden 2023; Gordon et al. 2022; Ramachandran 2022; Waldman 2022). The polarization of public attitudes and hostility toward elections and election workers are common public knowledge, however, no systematic census has been conducted of methods of threat mitigation or protection and their efficacy, nor whether or how the future labor market might be affected by political polarization or the need for enhanced safety.

INCREASED WAGES

In the case of election office staff, one consideration is whether increased wages would make a difference in mitigating attrition, given that the field is widely reported to be under-resourced (Gordon, Thorning, and Weil 2022; Hale and Brown 2020; Stewart 2022). No systematic research has been conducted on the effect of increased wages on the election administration workforce; however, inferences can be drawn from both economics and public administration. The evidence supporting a positive influence of increased wages on retention for bureaucrats and politicians is mixed. Efficiency wage theories suggest that government agencies may find it “profitable”/socially optimal to pay above market-clearing wages in order to attract and retain top talent (Besley 2004; Messner and Pol-

30 Every legislative change in election practice is a potential change in poll worker responsibilities and training. Since 2020, legislatures across the country have been remarkably active on election practices; see, <https://www.ncsl.org/technology-and-communication/ncsl-50-state-searchable-bill-tracking-databases>

31 The percentage of ballots cast in an election jurisdiction that did not produce a valid vote in a specific race, most importantly in the top-of-the-ballot race, usually for president or governor (Alvarez and Antonsson 2007, 7).

born 2003; Kotakorpi and Poutvaara 2011; Gagliarducci and Nannicini 2013). Higher wages may also increase work effort and decrease interest in moonlighting (Gagliarducci, Nannicini, and Naticchioni 2010). Alternative theories predict that higher wages for public service positions may attract individuals whose primary motive is not working for the greater good, and may also increase demand for leisure (Altindag, Filiz, and Tekin 2020; Katz 1986; Mocan and Altindag 2013); although the former idea has emerged in thinking about poll worker compensation (Burden and Milyo 2015), research is limited. Moreover, public service motivation is well-established as a positive factor in improved retention in public sector employment, independent of rates of pay (Brewer, Selden, and Facer 1998; Christensen, Paarlberg, and Perry 2017; Clerkin and Cogburn 2012; Frederickson and Hart 1985; Moynihan and Pandey 2007).³²

RECRUITING AND RETAINING POLL WORKERS

The statutes regarding who can serve and where they can serve vary across the 50 states and U.S. territories and, in many instances, constrain the recruitment and retention efforts of local election officials and opportunities to serve the public. Some jurisdictions require that a voter serve in their assigned precinct, while others allow a voter to serve anywhere in the county (portability). There is also variation in the number of hours a poll worker is required to work on election days, compensation, and requirements for training (United States Election Assistance Commission 2022).

Although there is some variation in how much poll workers are paid, poll workers generally receive low pay for long hours (Kimball et al. 2009; McAuliffe 2009; Merivaki 2020). These workplace conditions are typically offered as barriers to poll worker recruitment. Recruitment difficulties may be easing (EAVS 2022). As noted in the “best practices” section, election officials propose strategies to attract and retain poll workers and submit these for review by the field or by the EAC. Tips and guidance can also be found on the EAC website (e.g., National Poll Worker Recruitment Day, youth poll worker programs, engaging with specific populations on language/culture and accessibility), on websites of consultants in the field (e.g., the Elections Group), and through the efforts of numerous groups (electionhero.org; civic holidays.org); however,

the efficacy of these efforts is not the subject of systematic study and more could be known.

Although limited in number and reach, studies of poll worker motivation conclude that pay is a minor factor for the majority of poll workers (Glaser and MacDonald 2007; Kimball et al. 2010). One reason may be that poll workers are observed to be “stipended volunteers”³³ for whom pay is an ancillary benefit of their civic-minded volunteer service but not the primary motivating factor (Clark and James 2023; McAuliffe 2009; Tschirhart et al. 2001). Burden and Milyo (2015) caution against increasing poll worker pay because of this weak link to motivation, and because increasing payments may result in the inclusion of poll workers who are motivated more by monetary reward than civic duty, and such individuals may require more supervision and training.

In limited study, findings indicate that policy interventions may improve recruitment (or not). For example, portability has been found to significantly improve recruitment (Jones and Stein 2021). Difficulties in recruiting are marginally improved by policies that permit part-time service (Hostetter 2020; Jones and Stein 2021) and all mail voting as well as increased proportions of voters over the age of 65 (Jones and Stein 2021); in-person early voting does not significantly ease the difficulty of recruiting poll workers, and it is significantly difficult to recruit poll workers for Election Day vote centers; however, here, compensation improved recruitment (Jones and Stein 2021).

These findings taken together may offer suggestions for paths forward, however, Burden and Stein (2023)³⁴ note that significant changes since 2020 (concerns about public health, mis-, dis-, and mal-information, and harassment and threats to poll workers) merit further investigation to inform understanding of the effect on poll worker motivation, and whether election policies can mitigate these effects.

32 Although beyond the scope of this report, public service motivation literature also examines the relative roles of gender, race, and other factors.

33 See Tschirhart et al. 2001, 422.

34 See Burden and Stein 2023 at electionlab.mit.edu

CONCLUSIONS

The following opportunities for further research are suggested by this report on the state of the field.

Workforce Demographics: What would a census of the actual election administration workforce show us (we have proposed this twice to the NSF but were told it is too expensive—possible role for the EAC)? How does this workforce compare with the broader public administration workforce? What are the best ways to compare (jurisdiction type, structure, laws, practices, positions, etc.)? Are the different categories of employees, requirements, related work tasks, and compensation meaningful? Does method of selection have any real impacts (attitudes and public service orientation, performance versus perception of performance)? How is the profession changing and what are the stimuli for those changes? Is there more movement in and out of the profession now than in the past? If so, what impact should this have on training, processes, and documentation? How much does the vendor community comprise or augment the workforce? What are the opportunities and challenges of this?

Training and Certification: To what extent does extant training reflect established methods from the science of teaching and learning field? How does training and certification matter? What approaches to training work best for different types of poll workers? Does this vary by state laws, practices, equipment, and processes?

Workforce Development: Do the array of “best practices” and prevailing wisdom stand up to systematic investigation? Do these practices travel across states and jurisdiction sizes and types? What approaches to recruitment and retention are most effective in ensuring a diverse body of election officials and poll workers? What factors actually influence recruitment of election officials and poll workers? What factors actually influence retention of election officials and poll workers? Research does not appear to conclusively support increasing pay as a solution for poll worker recruitment and/or retention issues. What are the best ways to mitigate pressure on the workforce?

APPENDIX

Appendix A. NASPAA Election Administration Course Information 2020

Name of University	Certificate/ Training Program/ Courses	Name of Course	When Course is Offered	Mode of Delivery
Auburn University	Graduate Certificate in Election Administration	POLI 6270: Seminar in Election Administration (Required)	Spring (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	POLI 6280: Election Regulation and Reform (Required)	Fall (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	POLI 7920: Internship (Required) Practitioners can use the Election Center Certified Elections/ Registration Administrator (CERA) program certification to fulfill the internship requirement.	Fall, Spring, Summer (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	ePortfolio (Required)	Fall, Spring (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	POLI 6150: Federalism and Intergovernmental Relations (Elective)	Spring (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	POLI 6290: Public Sector Information, Security, and Risk Management (Elective)	Summer (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	POLI 6470: Comparative Election Administration (Elective)	Fall (annually)	Online and in person
Auburn University	Graduate Certificate in Election Administration	POLI 7520 Program Evaluation (Elective)	Summer (annually)	Online and in person
Auburn University	Undergrad/MPA/PhD/ Graduate Certificate in Election Administration	Election Law	Annually	In person
Auburn University	Undergrad/MPA/PhD/ Graduate Certificate in Election Administration	Parties, Campaigns, and Voting Behavior	Every other year	In person
Auburn University	Undergrad/MPA/PhD/ Graduate Certificate in Election Administration	Public Opinion and Voting Behavior	Every other year	In person
California State University, Fresno		PLSI 156T: Campaigns and Elections (3 units, elective)	Fall 2020	In person
Drake University Law School		Election Law	Fall 2020	In Person

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Name of University	Certificate/ Training Program/ Courses	Name of Course	When Course is Offered	Mode of Delivery
Florida State University College of Law		Election Law	Fall 2019, Fall 2020	In Person
Mills College	1-credit class (5 class meetings) Open to the Community	PPOL 280D, Legislative Apportionment and Redistricting	Spring 2020	In Person
Mills College	1-credit class (5 class meetings) Open to the Community	PPOL 280E, Elections	Fall 2020	Online
Mississippi State University	Election Administration Certificate	PS 4990/6990 State Election Policy and Politics	Spring 2020	In Person
Northwestern Law School		Election Law	Fall 2020	In person
Ohio State University	Training program for Ohio Registered Election Officials	Elective Course 104: Money and Politics and Campaign Finance	Ongoing	In Person
Ohio State University	Training program for Ohio Registered Election Officials	Elective Course 105: Poll Workers: Recruitment, Training and Retention	Ongoing	In Person
University of Kentucky College of Law		Election Law	Spring 2020	In Person
University of Minnesota	Election Administration Certificate	PA 3969/5971 – Survey of Election Administration (3 cr.) (Required)	Fall 2020	Online
University of Minnesota	Election Administration Certificate	PA 3972/5972 – Elections and the Law (3 cr.) (Required)	Spring 2020	Online
University of Minnesota	Election Administration Certificate	PA 3973/5973 – Strategic Management of Election Administration (2 cr.) (Required)	Spring 2020	Online
University of Minnesota	Election Administration Certificate	PA 3974/5974 – Election Administration Capstone Project (2 cr.) (Required)	Spring 2020	Online
University of Minnesota	Election Administration Certificate	PA 3975/5975 – Election Design (2 cr.) (Elective)		Online
University of Minnesota	Election Administration Certificate	PA 3976/5976 – Voter Outreach and Participation (1 cr.) (Elective)	Spring 2020	Online
University of Minnesota	Election Administration Certificate	PA 3982/5982 – Data Analysis for Election Administration (2 cr.) (Elective)		Online
University of Minnesota	Election Administration Certificate	PA 3983/5983 – Cybersecurity and Elections (1 cr.) (Elective)	Fall 2020	Online
University of Minnesota	Election Administration Certificate	PA 3984/5984 - Elections Security: How to Protect America’s Elections (2 cr.) (Elective)	Spring 2020	Online
University of Wisconsin-Madison		Political Science 305: Elections and Voting Behavior	Spring 2022	In Person

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

Name of University	Certificate/ Training Program/ Courses	Name of Course	When Course is Offered	Mode of Delivery
University of Wisconsin-Madison		Political Science 511: Campaign Finance	Fall 2021	In Person
University of Wisconsin-Madison		Political Science 601: Election Reform in America	Spring 2022	In Person
Western Carolina University	Election Administration Course	Election Administration	Spring 2020	In Person
William & Mary Law School		Advocacy Regulation	Fall 2020	In person
William & Mary Law School		Election Law	Fall 2020	In person
William & Mary Law School		Election Security Law	Spring 2020	In person
William & Mary Law School		Lawyering a Campaign	Spring 2020	In person
William & Mary Law School		Legislative Redistricting and GIS	Fall 2020	In person

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REFERENCES

- Adona, Natalie, Paul Gronke, Paul Manson, and Sarah Cole. 2019. *Stewards of Democracy: The Views of American Local Election Officials*. Washington, DC: Democracy Fund.
- Altindag, Duha T., Elif Filiz, and Erdal Tekin. 2020. “Does It Matter How and How Much Politicians are Paid?” *Economica* 87 (348), pp. 1105-1132.
- Alvarez, R. Michael, and Erik K. Antonsson. 2007. “Bridging Science, Technology, and Politics in Election Systems.” *The Bridge* 7 (2): 6-11.
- Alvarez, R. Michael, and Thad E. Hall. 2006. “Controlling Democracy: The Principle-Agent Problem in Election Administration.” *Policy Studies Journal* 34: 491-510.
- Anderson, Lorin W., and David R. Krathwohl, eds. 2001. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom’s Taxonomy of Educational Objectives*. New York: Addison Wesley Longman, Inc.
- Aneja, Abhay, and Guo Xu. 2022. “The Costs of Employment Segregation: Evidence from the Federal Government under Woodrow Wilson.” *The Quarterly Journal of Economics* 137 (2): 911-58.
- Anthony, Joseph., Amy Fried, Robert Glover, and David C. Kimball. 2021. “Ranked Choice Voting in Maine from the Perspective of Local Election Officials.” *Election Law Journal: Rules, Politics, and Policy* 20 (3): 254-271.
- Atkeson, Lonna R., and Kyle L. Saunders. 2007. “The Effect of Election Administration on Voter Confidence: A Local Matter?” *PS: Political Science and Politics* 40 (4): 655-660. <http://www.jstor.org/stable/20452045>
- Atkeson, Lonna R., Yann P. Kerevel, R. Michael Alvarez, and Thad E. Hall. 2014. “Who Asks for Voter Identification? Explaining Poll-Worker Discretion.” *The Journal of Politics* 76 (4): 944-957.
- Bear, Anne A. Ghost. 2012. “Technology, Learning, and Individual Differences.” *Journal of Adult Education* 41 (2).
- Benenson Strategy Group. 2023. “Local Election Officials Survey 2023.” Brennan Center for Justice. <https://www.brennancenter.org/our-work/research-reports/local-election-officials-survey-april-2023>.
- Berman, Evan M. 2006. *Performance and Productivity in Public and Nonprofit Organizations*, 2nd ed. Armonk, NY: M.E. Sharpe.
- Besley, Timothy. 2004. “Paying politicians: theory and evidence.” *Journal of the European Economic Association* 2(2-3), pp. 193-215.
- Bouchard, Paul. 2001. *Experiential Teaching and Learning*. In *The Craft of Teaching Adults*, Thelma Barer-Stein & Michael Kompf Eds. Toronto, Ontario: Irwin Publishing.
- Brewer, Gene A., Sally Coleman Selden, and Rex L. Facer II. 1998. *Individual Conceptions of Public Service Motivation*. *Public Administration Review* 60: 254-264.
- Brown, Mitchell, and Kathleen Hale. 2019. “Professionalism and Professional Associations.” In *The Future of Election Administration*, edited by Mitchell Brown, Kathleen Hale, and Bridgett King. Elections, Voting and Technology series, New York: Palgrave Macmillan.
- Burden, Barry C., and Jeffrey Milyo. 2015. “The Quantities and Qualities of Poll Workers.” *Election Law Journal: Rules, Politics, and Policy*, 38-46. <http://doi.org/10.1089/elj.2014.0277>.
- Burden, Barry C., David T. Canon, Stephane Lavertu, Kenneth R. Mayer, and Donald P. Moynihan. 2013. “Selection Method, Partisanship, and the Administration of Elections.” *American Politics Research* 41, no. 6: 903-936.
- Christensen, Robert K., Laurie Paarlberg, and James L. Perry. 2017. “Public Service Motivation Research: Lessons for Practice.” *Public Administration Review* 77: 529-542
- Chuang, Tsung-Yen, Martin K.-C. Yeh, and Yu-Lun Lin. 2021. “The Impact of Game Playing on Students’ Reasoning Ability, Varying According to Their Cognitive Style.” *Educational Technology & Society* 24 (3): 29-43.
- Claassen, Ryan L., David B. Magleby, J. Quin. Monson, and Kelly D. Patterson. 2008. “‘At Your Service’: Voter Evaluations of Poll Worker Performance.” *American Politics Research* 36 (4): 612-634. <https://doi.org/10.1177/1532673X08319006>

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

- Clark, Alistair., and Toby S. James. 2023. "Electoral Administration and the Problem of Poll Worker Recruitment: Who Volunteers, and Why?" *Public Policy and Administration* 38 (2), 188-208. <https://doi.org/10.1177/09520767211021203>.
- Clerkin, Richard M., and Jerrell D. Cogburn. 2012. "The Dimensions of Public Service Motivation and Sector Work Preferences." *Review of Public Personnel Administration* 32:209-35.
- Costain, Anne, and Andrew S. McFarland. 1998. *Social Movements and American Political Institutions*. New York: Rowman & Littlefield Publishers.
- Crews, John E., and Vincent A. Campbell. 2004. "Vision Impairment and Hearing Loss Among Community-Dwelling Older Americans: Implications for Health and Functioning." *American Journal of Public Health* 94 (5): 823-829.
- Dagilyte, Egle, and Peter Coe. 2019. "Take-home Exams: Developing Professionalism via Assessment." In *Critical Perspectives on the Scholarship of Assessment and Learning in Law*, Volume 1, edited by Alison Bone and Paul Maharg. ANU Press.
- Edlin, Ruby, and Lawrence Norden. 2023. "Poll of Election Officials Shows High Turnover amid Safety Threats and Political Interference." Brennan Center for Justice. <https://www.brennancenter.org/our-work/analysis-opinion/poll-election-officials-shows-high-turnover-amid-safety-threats-and>.
- El-Bishouty, Moushir, Ahmed Aldraiweesh, Uthman Alturki, Richard Tortorella, Junfeng Yand, Ting-Wen Chang, Sabine Graf, and Kinshuk. 2019. "Use of Felder and Silverman Learning Style Model for Online Course Design." *Educational Technology Research and Development* 67 (1): 161-177.
- Ernst, Anna. 2019. "Review of Factors Influencing Social Learning within Participatory Environmental Governance." *Ecology and Society* 24 (1).
- Ewald, Alec. 2009. The Way We Vote: The Local Dimension of American Suffrage*. Nashville, TN: Vanderbilt University Press.
- Favreau, Jenifer M., and Emily Kay Hanks. 2016. "Improving Election Poll Worker Training: Reflections on Implementing New Ideas for Measurable Success." *Administrative Theory & Praxis* 38 (1): 68-81, DOI: 10.1080/10841806.2015.1128219
- Ferrer, Joshua, Igor Geyn, and Daniel M. Thompson. 2023. "How Partisan Is Local Election Administration?" *American Political Science Review FirstView* July 19, 2023, pp. 1-16
- Fischer, Eric A., and Kevin J Coleman. 2011. "How Local Election Officials View Election Reform: The Results From Three National Surveys." Washington, DC: Congressional Research Service.
- Frederickson, George. H., and David Hart. 1985. "The Public Service and Patriotism of Benevolence." *Public Administration Review* 45: 547-553
- Friedson, Eliot. 2001. *Professionalism, the Third Logic: On the Practice of Knowledge*. Chicago: University of Chicago Press.
- Gagliarducci, Stefano, and Nannicini, Tommaso. 2013. "Do better paid politicians perform better? Disentangling incentives from selection." *Journal of the European Economic Association* 11: 369-98.
- Gagliarducci, Stefano, Nannicini, Tommaso, and Naticchioni, Paolo. 2010. "Moonlighting politicians." *Journal of Public Economics*, vol. 94(9-10), pp. 688-99.
- Gardner, Howard. 1983. *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.
- Glaser, Bonnie, and Karin Mac Donald. 2007. "The Attraction of Working from 6 am to 9:30 pm for a Fraction of Minimum Wage: Poll Workers and Their Motivation to Serve." Midwest Political Science Association Conference.
- Glaser, Bonnie, Karin Mac Donald, Iris Hui, and Bruce E. Cain. 2007. "Explaining Voting System Performance: Do Technology, Training, and Poll Worker Characteristics Matter?" https://www.researchgate.net/publication/238496356_Explaining_Voting_System_Performance_Do_Technology_Training_and_Poll_Worker_Characteristics_Matter.
- Goldin, Claudia, and Lawrence F Katz. 2009. *The Race between Education and Technology*. Cambridge, MA: Harvard University Press.
- Gordon, Grace, David Levine, Christopher Thomas, and Rachael Dean Wilson. 2022. "Deterring Threats to Election Workers." Bipartisan Policy Center. <https://bipartisanpolicy.org/report/deterring-threats-to-election-workers/>.

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

- Gordon, Grace, and Rachel Orey. 2022. "Fortifying Election Security through Poll Worker Policy." Bipartisan Policy Center. https://bipartisanpolicy.org/download/?file=/wp-content/uploads/2022/10/BPC-Poll-Worker-Policy_RV4.pdf.
- Government Accountability Office. 2009. "Elderly Voters: Information on Promising Practices Could Strengthen the Integrity of the Voting Process in Long-term Care Facilities." Washington, D.C.
- Gronke, Paul, Paul Manson, Natalie Adona, and Jay Lee. 2023. A Demographic and Professional Profile of the Frontline Workers of American Elections. In *Frontline of Elections*. Palgrave Macmillan, forthcoming 2023
- Gronke, Paul, Paul Manson, and Evan Crawford. 2018. "Democracy Fund/Reed College 2018 Survey of Local Election Officials." *Elections & Voting Information Center at Reed College*.
- Gronke, Paul, Paul Manson, and Jay Lee. 2019. "Democracy Fund/Reed College 2019 Survey of Local Election Officials." *Elections & Voting Information Center at Reed College*.
- . 2020. "Democracy Fund/Reed College 2020 Survey of Local Election Officials." *Elections & Voting Information Center at Reed College*
- Gudivada, Venkat N. 2017. "Cognitive Analytics Driven Personalized Learning." *Educational Technology* 57 (1): 23-31.
- Gulbahar, Yasemin, and Ayfer Alper. 2004. "Learning Preferences and Learning Styles of Online Adult Learners." *International Education Journal* 4: 270-278.
- Hale, Kathleen. 2011. *How Information Matters: Networks and Public Policy Innovation*. Washington, DC: Georgetown University Press.
- Hale, Kathleen, and Mitchell Brown. 2013. "Adopting, Adapting, and Opting Out: State Response to Federal Voting System Guidelines." *Publius* 43:428-451.
- Hale, Kathleen, and Mitchell Brown. 2016. "Inter-local Diffusion and Difference: How Networks Are Transforming Public Service." In *Transforming Government Organizations: Fresh Ideas and Examples from the Field*, edited by Floyd Dewey, William Sauser, and Sheri Bias. Information Age Publishing.
- Hale, Kathleen, and Mitchell Brown. 2020. *How We Vote: Innovation in American Elections*. Washington, D.C.: Georgetown University Press.
- Hale, Kathleen, and Mitchell Brown. Forthcoming 2024. *Administering Elections: How American Elections Work*, 2nd ed. New York, NY: Palgrave Macmillan.
- Hale, Kathleen, Robert Montjoy, and Mitchell Brown. 2015. *Administering Elections: How American Elections Work*. New York, NY: Palgrave Macmillan.
- Hall, Thad E., J. Quin Monson, and Kyle D. Patterson. 2009. "The Human Dimension of Elections: How Poll Workers Shape Public Confidence in Elections." *Political Research Quarterly* 62 (3): 507-522. <https://doi.org/10.1177/1065912908324870>
- Harris, Joseph P. 1928. "Permanent Registration of Voters." *The American Political Science Review* 22: 349-353.
- . 1929. "The Progress of Permanent Registration of Voters." *The American Political Science Review* 23: 908-914.
- . 1934. *Election Administration in the United States*. Washington, DC: Brookings Institute Press.
- Havemann, Leo, Simon Katan, Edward Anstead, Marco Gillies, Joanna Stroud, and Sarah Sherman. 2023. "Digitally Supported Assessment." In *Online and Distance Education for a Connected World*, edited by Linda Amrane-Cooper, David Baume, Stephen Brown, Stylianos Hatzipanagos, Philip Powell, Sarah Sherman, and Alan Tait. UCL Press.
- Hong, Jon-Chao, Xiaohong Lui, Wei Cao, Kai-Hsin tai, and Li Zhao. 2022. "Effects of Self-Efficacy and Online Learning Mind States on Learning Ineffectiveness during the COVID-19 Lockdown." *Educational Technology & Society* 25 (1): 142-154.
- Hostetter, Joshua. 2020. "Portable Poll Workers: Eliminating the Precinct Requirements in U.S. Elections." *Election Law Journal: Rules, Politics, and Policy* 19 (3): 392-401.
- Huang, Tien-Chi, Mu-Yen Chen, and Wen-Pao Hsu. 2019. "Do Learning Styles Matter? Motivating Learners in an Augmented Geopark." *Journal of Educational Technology & Society* 22 (1): 70-81.

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

- Jarvis, Peter. 2014. "From Adult Education to Lifelong Learning and Beyond." *Comparative Education* 50 (1): 45-57.
- Jones, Colin J. and Robert M. Stein. 2021. "Recruiting Persons to Work the Polls." *Election Law Journal: Rules, Politics, and Policy*, 315-326. <http://doi.org/10.1089/elj.2020.0701>.
- Katz, Lawrence F. *Efficiency Wage Theories: A Partial Evaluation*. NBER Macroeconomics Annual. 1986;1:235-290.
- Kelly, Martin G. 2013. "Using Learning Preferences to Direct Teaching and Balance Academic Performance." *Journal of College Science Teaching* 42 (5): 20-28.
- Keyssar, Alexander. 2009. *The Right to Vote: The Contested History of Democracy in the United States*. New York: Basic Books.
- Kimball, David C., and Martha Kropf. 2006. "The Street-Level Bureaucrats of Elections: Selection Methods for Local Election Officials." *Review of Policy Research* 23: 1257-1268.
- Kimball, David C., Brady Baybeck, Cassie Gross, and Laura Wiedlocher. 2010. "Survey of Poll Worker Recruitment, Training, and Evaluation Practices by Local Election Officials." http://www.umsl.edu/~kimballd/report_june112010.pdf.
- Kimball, David C., Martha Kropf, Donald Moynihan, and Carol L. Silva. 2013. "The Policy Views of Partisan Election Officials." *UC Irvine L. Rev.* 3: 551.
- Kimball, David C., Martha Kropf, and Lindsay Battles. 2006. "Helping America vote? Election Administration, Partisanship, and Provisional Voting in the 2004 Election." *Election Law Journal* 5: 447-461.
- King, Bridgett A. 2017. "Policy and Precinct: Citizen Evaluations and Electoral Confidence." *Social Science Quarterly* 98: 672-689. <https://doi.org/10.1111/ssqu.12303>
- King, Bridgett A., and Alicia Barnes. 2019. "Descriptive Representation in Election Administration: Poll Workers and Voter Confidence." *Election Law Journal: Rules, Politics, and Policy* 18 (1): 16-30. <http://doi.org/10.1089/elj.2018.0485>.
- Klinger, Donald E., and John Nalbandian 2003. *Public Personnel Management: Context and Strategies*, 5th ed. Saddle River, NJ: Prentice Hall.
- Knoll, Abby R., Hajime Otani, Reed Skeel, and K. Roger Van Horn. 2017. "Learning Style, Judgements of Learning, and Learning of Verbal and Visual Information." *British Journal of Psychology* 108: 544-563
- Knowles, Malcolm S., Elwood F. Holton, and Richard A. Swanson. 2011. *The Adult Learner: The Definitive Classic in Adult Education and Human Resource Development*, 7th ed. Amsterdam; Boston: Elsevier, Butterworth-Heinemann.
- Kotakorpi, Kaisa, and Poutvaara, Panu. 2011. "Pay for politicians and candidate selection: an empirical analysis." *Journal of Public Economics* 95: 877-85.
- Kropf, Martha, Tim Vercellotti, and David C. Kimball. 2013. "Representative Bureaucracy and Partisanship: The Implementation of Election Law." *Public Administration Review* 73 (2) (March/April): 242-252.
- Larson, Kevin, and James Sheedy. 2008. "No Better Than a Poke in the Eye." *Eye Vol* 67: 95.
- Lauwers, Gracienne. 2019. "Reshaping Teacher Training to Get the Right Education System for a Knowledge Society." In *Rethinking Teacher Education for the 21st Century*, edited by Marta Kowalczyk-Waledziak, Alicja Korzeniecka-Bondar, Wioleta Danilewicz, and Gracienne Lauwers. Verlag Barbara Budrich.
- Lear, J.L., D. Bridges, B. Van Horn, and K.A. Hodge. 2019. "Teaching Strategies That Promote Learning for the 21st Century Student." *NACTA Journal* 63 (2): 127-132.
- Lee, Hyung-Woo, Peter J. Robertson, Lavonna Blair Lewis, David C. Sloan, Lark Galloway-Gilliam, and Jonathan Nomachi. 2011. "Trust in a Cross-Sectoral Interorganizational Network: An Empirical Investigation of Antecedents." *Nonprofit and Voluntary Sector Quarterly* 41: 609-631.
- Lehman, Mary E. 2019. "Using VARK Learning Styles to Predict Instructional Preferences." *NACTA Journal* 63 (2): 109-114.
- Li, Fengying, Yifeng He, and Qingshui Xue. 2021. "Progress, Challenges and Countermeasures of Adaptive Learning." *Educational Technology & Society* 24 (3): 238-255.
- Li, Shijin, and Xiaoqing Gu. 2023. "A Risk Framework for Human-centered Artificial Intelligence in Education." *Educational Technology & Society* 26 (1): 187-202.

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

- Lidwell, William, Kritina Holden, and Jill Butler. 2003. *Universal Principles of Design: 100 Ways to Enhance Usability, Influence Perception, Increase Appeal, Make Better Design Decisions, and Teach through Design*. Rockport.
- Lipsky, Michael. 1980. *Street-Level Bureaucracy*. New York, NY: Russell Sage Foundation
- Manion, Anita, David C. Kimball, Joseph Anthony, and Paul Gronke. 2023. "Comparing Elite and Public Opinion on Election Administration and Reform." Forthcoming in *Frontline of Elections*. Palgrave Macmillan.
- Manson, Paul, Natalie Adona, and Paul Gronke. 2020. "Staffing the Stewards of Democracy: The Demographic and Professional Profile of America's Local Election Officials." In *Annual Meeting of the Southern Political Science Association*. San Juan, PR.
- Marienau, Catherine. 1999. "Self-Assessment at Work: Outcomes of Adult Learners' Reflections on Practice." *Adult Education Quarterly* 49 (3): 135-146.
- Martin, Bella, and Bruce Hanington. 2012. *Universal Methods of Design. 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*. Rockport.
- Masalimova, Alfiya R., Muhammet Usak, and Almira R. Shaidullina. 2016. "Advantages and Disadvantages of National and International Corporate Training Techniques in Adult Education." *Current Science* 111 (9):1480-1485.
- McAuliffe, Elizabeth W. 2009. "The Unexamined Element of Election Administration: Why Citizens Choose to Serve at Poll Workers on Election Day." Ph.D. dissertation. Florida State University.
- McBrayer, Markie, R. Lucas Williams, and Andrea Eckelman. 2020. "Local Officials as Partisan Operatives: The Effect of County Officials on Early Voting Administration." *Social Science Quarterly* 101: 1475-1488.
- McClusky, Howard Y. 1963. "Course of the Adult Life Span." In *Psychology of Adults*, edited by W. C. Haltenbeck. Chicago: Adult Education Association of U.S.A.
- Merivaki, Thessalia. 2020. *The Administration of Voter Registration: Expanding the Electorate across and within the States*, 1st ed. Palgrave Pivot.
- Merriam, Sharan B. 2017. "Adult Learning Theory: Evolution and Future Directions." *PAACE Journal of Lifelong Learning* 26: 21-37.
- Messner, Matthias, and Polborn, Mattias. 2004. "Paying politicians." *Journal of Public Economics* 88: 2423-45.
- Mocan, Nace, and Duha T. Altindag. 2013. "Salaries and Work Effort: An Analysis of the European Union Parliamentarians." *Economic Journal* 123(573), pp. 1130-1167.
- Montjoy, Robert S. 2008. "The Public Administration of Elections." *Public Administration Review* 68 (5): 788-99. <https://doi.org/10.1111/j.1540-6210.2008.00919.x>.
- Moreira, Diana, and Santiago Pérez. 2021. "Civil Service Exams and Organizational Performance: Evidence from the Pendleton Act." <https://doi.org/10.3386/w28665>.
- Mossberger, Karen. 2000. *The Politics of Ideas and the Spread of Enterprise Zones*. Washington, D.C.: Georgetown University Press.
- Moynihan, Donald P., and Sanjay K. Pandey. 2007. "The Role of Organizations in Fostering Public Service Motivation." *Public Administration Review* 67: 40-53
- National Conference of State Legislatures. "Election Administration at State and Local Levels." <https://www.ncsl.org/elections-and-campaigns/election-administration-at-state-and-local-levels> Retrieved September 1, 2023.
- Newton, Phillip M. 2015. "Learning Styles Myth is Thriving in Higher Education." *Frontiers in Psychology* 6. DOI=10.3389/fpsyg.2015.01908.
- Norman, Don. 2013. *The Design of Everyday Things*. Basic Books.
- Page, Antony, and Michael J. Pitts. 2009. "Poll Workers, Election Administration, and the Problem of Implicit Bias." *Michigan Journal of Race and Law* 15. <https://repository.law.umich.edu/cgi/viewcontent.cgi?article=1076&context=mjrl>.
- Papanek, Victor. 1971. *Design for the Real World*. Chicago Review Press.

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

- Porter, Ethan, and Jon C. Rogowski. 2018. "Partisanship, Bureaucratic Responsiveness, and Election Administration: Evidence from a Field Experiment." *Journal of Public Administration Research and Theory* 28(4): 602-17.
- Quesenbery, Whitney, and Sarah Horton. 2014. *A Web for Everyone: Designing Accessible User Experiences*. Rosenfeld Media.
- Radin, Beryl. 2006. *Challenging the Performance Movement: Accountability, Complexity, and Democratic Values*. Washington, D.C.: Georgetown University Press.
- Rainey, Hal G, and Paula Steinbauer. 1999. "Galloping elephants: Developing a theory of effective government organizations." *Journal of Public Administration Research and Theory* 9: 1-32.
- Ramachandran, Gowri. 2022. "How Congress Can Help Protect Election Workers." Brennan Center for Justice. <https://www.brennancenter.org/our-work/research-reports/how-congress-can-help-protect-election-workers>.
- Ratnasari, Wiwit, Tzu-Chuan Chou, and Chen-Hao Huang. 2023. "Exploring the Research Trajectory of Digital Game-based Learning." *Educational Technology & Society* 26 (1): 45-61.
- Schur, Lisa, Mason Ameri, and Meera Adya. 2017. "Disability, Voter Turnout, And Polling Place Accessibility." *Social Science Quarterly* 98: 1374-1390.
- Schur, Lisa, Meera Adya, and Mason Ameri. 2015. "Accessible Democracy: Reducing Voting Obstacles for People with Disabilities." *Election Law Journal* 14: 60-65.
- Schur, Lisa, Todd Shields, Douglas Kruse, And Kay Schriner. 2002. *Enabling Democracy: Disability and Voter Turnout*. *Political Research Quarterly*, Vol. 55: 167-190
- Shepherd, Michael E., Adriane Fresh, Nick Eubank, and Joshua D. Clinton. 2021. "The Politics of Locating Polling Places: Race and Partisanship in North Carolina Election Administration, 2008-2016." *Election Law Journal: Rules, Politics, and Policy* 20(2):155-77.
- Sims, Ronald R., and Serbrenia J. Sims. 1995. *The Importance of Learning Styles: Understanding*. Praeger.
- Smith, Scott P. 2017. "Adult Learners." *Professional Safety* 62 (12): 22-25.
- Stewart, Charles III. 2018. "The Elections Performance Index: Past, Present, the Future." <http://dx.doi.org/10.2139/ssrn.3249830>.
- _____. 2022. *The Cost of Conducting Elections*. Cambridge, MA: MIT Election Data + Science Lab, Common Sense America, and Institute for Civil Discourse.
- _____. 2023. "2022 Survey of the Performance of American Elections." <https://doi.org/10.7910/DVN/SPU2XP>, Harvard Dataverse
- Stiff, Paul 1996. "Instructing the Printer: What Specification Tells about Typographic Designing." *Typography Papers* 1 : 27-74. University of Reading.
- Stuart, Guy. 2004. "Databases, felons, and voting: Bias and partisanship of the Florida Felons List in the 2000 elections." *Political Science Quarterly* 119, 453-475.
- Talbert, B. Allen, Barry Croom, Sarah E. LaRose, Rosco Vaughn, and Jasper S. Lee. 2022. *Foundations of Agricultural Education*, 4th ed. Purdue University Press.
- Taylor, Maurice C., David L. Trumppower, and Edward R. Purse. 2015. "The Role of Work-Related Learning in the Identity Transformation of Canadian Workers with Low Literacy Skills." *International Review of Education* 61 (6): 815-833.
- Terry, Jim, Katie Dunlap, Steve Flickinger, and Dan Woosley. 2019a. "Common Physical Barriers that Limit Access for Voters with Disabilities and Options to Solve Them." In *The Future of Election Administration: Cases and Conversations*, edited by Mitchell Brown, Kathleen Hale, and Bridgett King. New York: Palgrave Macmillan. pp 221-226.
- . 2019b. "Communications and Etiquette Considerations When Working with Voters Who Have Disabilities." In *The Future of Election Administration: Cases and Conversations*, edited by Mitchell Brown, Kathleen Hale, and Bridgett King. New York: Palgrave Macmillan. pp 227-232.

ELECTION OFFICIAL AND POLL WORKER RECRUITMENT, TRAINING, AND RETENTION

- Tschirhart, Mary, Mesch, Debra J., Perry, James L., Miller, Theodore K., & Lee, Geunjo. 2001. Stipended Volunteers: Their Goals, Experiences, Satisfaction, and Likelihood of Future Service. *Nonprofit and Voluntary Sector Quarterly*, 30(3), 422–443. doi.org/10.1177/0899764001303002
- Ultanir, Emel. 2012. “An Epistemological Glance at the Constructivist Approach: Constructivist Learning in Dewey, Piaget, and Montessori.” *International Journal of Instruction* 5 (2): 1694-1722.
- [U. S. Election Assistance Commission. 2007. “Compendium of State Poll Worker Requirements.” \[https://www.eac.gov/sites/default/files/eac_assets/1/1/Compendium%20of%20State%20Poll%20Worker%20Requirements.pdf\]\(https://www.eac.gov/sites/default/files/eac_assets/1/1/Compendium%20of%20State%20Poll%20Worker%20Requirements.pdf\).](https://www.eac.gov/sites/default/files/eac_assets/1/1/Compendium%20of%20State%20Poll%20Worker%20Requirements.pdf)
- . 2020. “State-by-State Compendium Election Worker Laws and Statutes.” Retrieved from https://dev.eac.gov/sites/default/files/electionofficials/pollworkers/Compendium_2020.pdf.
- . 2022. *Disability, the Voting Process, and the Digital Divide*. Washington, D.C. United States Election Assistance Commission and Rutgers, The State University of New Jersey.
- Wahlgren, Bjarne. 2016. “Adult Educators’ Core Competencies.” *International Review of Education* 62 (3): 343-353.
- Waldman, Michael. 2022. “Attacks against Election Officials Are Taking a Toll.” Brennan Center for Justice. <https://www.brennancenter.org/our-work/analysis-opinion/attacks-against-election-officials-are-taking-toll>.
- Watts, Lauren. 2014. “Re-examining Crawford: Poll Worker Error as a Burden on Voters.” *Washington Law Review* 89: 175–216.
- Wilder, Will, and Andrew Garber. 2021. “Election Officials as Regulators of Voting Access.” Brennan Center for Justice. <https://www.brennancenter.org/our-work/analysis-opinion/election-officials-regulators-voting-access>.
- Wilson, James. Q. 1991. *Bureaucracy: What Government Agencies Do and Why They Do It*. New York: Basic Books.
- White, Ariel R., Noah L. Nathan, and Julie K. Faller. 2015. “What Do I Need to Vote? Bureaucratic Discretion and Discrimination by Local Election Officials.” *American Political Science Review* 109(1): 129–42.
- Yeo, Jungwon, and So Hee Jeon. 2023. “Diversity, Equity, Inclusions and Accessibility in Recent Public Administration Research: A Systematic Review of the Literature Since George Floyd.” *Journal of Policy Studies* 38: 33-54.