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The Future of Election Administration

Cases and Conversations

Edited by
Mitchell Brown
Kathleen Hale
Bridgett A. King

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Elections, Voting, Technology

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This series examines the relationships between people, electoral processes and technologies, and democracy. Elections are a fundamental aspect of a free and democratic society and, at their core, they involve a citizenry making selections for who will represent them. This series examines the ways in which citizens select their candidates—the voting technologies used, the rules of the game that govern the process—and considers how changes in processes and technologies affect the voter and the democratic process.

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Acknowledgments

We extend our deep appreciation to the election administrators, academics, and advocacy professionals who took time out of their busy schedules to attend the Inclusion and Integrity Symposium at Auburn University in 2017 and to subsequently contribute to *The Future of Election Administration* and *The Future of Election Administration: Cases and Conversations*. We know that we asked you to contribute to this volume during an election year. Your willingness to openly accept our invitation, first to the Symposium and then to write for these volumes, is but another indication of your commitment to the profession and to the scholarship for and about the field.

Because of your collective efforts, we are able to contribute two volumes to the literature that include voices and perspectives from the range of stakeholder groups who contribute to and play integral roles in the evolving field of election administration. It is our hope that the expertise reflected in this collection of chapters and case studies will serve as a resource that facilitates better understanding of the complexity of voting and election processes in the United States and the profession of election administration.

We would also like to thank Auburn University for its support of our efforts. The Department of Political Science and the College of Liberal Arts supported this work, as did the Master of Public Administration (MPA) and PhD in Public Administration and Policy Programs, and the Graduate Program in Election Administration. Special thanks are due to the Charles Wesley Edwards Jr. Endowment for supporting the symposiums. And in particular, we thank our graduate students—MPA Election Center Fellow Tyler St. Clair, MPA Graduate Research Assistant Emily

Hale, and PhD students Lindsey Forson and Shaniqua Williams. We are always learning about this field, and it has been a pleasure to have you learn along with us.

Research about public programs is not possible without open access to data—and not just numbers but also observations, interviews, and more. The transparency provided by election officials and other election community stakeholders has been essential to this project specifically and the field of election sciences more generally, and we are grateful for that. The openness of federal, state, and local officials, and vendors and advocates along with their interest in advancing the profession is encouraging and something for us all to celebrate and continue.

And not least, we are grateful for the support of the Election Center, also known as the National Association of Election Officials, both for its support for the symposium and its partnership with Auburn University. We believe our partnership and joint efforts over the past several decades to professionalize the field through Certified Elections Registration Administrator (CERA), the national certification for election professionals, has helped develop the field, and we look forward to future collaboration.

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Notes on Contributors

Bruce Adelson is a former US Department of Justice Civil Rights Division Voting Section senior trial attorney. Today, he is a nationally recognized speaker and expert on voting, elections, and voting accessibility. He has given voting and elections presentations to organizations including the Election Center, National Association of State Election Directors, and Harvard University. He teaches cultural and civil rights awareness and implicit bias at Georgetown University School of Medicine.

Lori Augino is Director of Elections for the Office of the Secretary of State. Augino was appointed by Secretary of State Kim Wyman in January 2013. In this position, Augino oversees federal, state, and local elections conducted by the 39 local County Auditors in Washington State. Augino serves as a member of the Election Assistance Commission's Technical Guidelines Development Committee (TGDC), serves as Incoming President for the National Association of State Election Directors (NASED), serves as a member of the Council of State Government's Election Technology Working Group, and serves as a member of the Department of Homeland Security's Elections Critical Infrastructure Government Coordinating Council. Prior to serving as Director of Elections, Augino worked for the Pierce County Auditor's Office for nearly 18 years, serving the citizens of Pierce County as the Chief Deputy Auditor from 2010 to 2013, overseeing the county's elections, licensing, recording, and animal control divisions. Augino served as Pierce County Elections

Manager from 2000 to 2010. Augino managed the closest election (and two recounts) in Washington's history during the 2004 General Election in Pierce County. In 2009, Lori was named County Election Employee of the Year by former Secretary of State Sam Reed. She's a graduate of the University of Washington, holding a BA in Politics, Philosophy, and Economics.

David Becker is Executive Director and Founder of the nonprofit Center for Election Innovation & Research (CEIR). As one of the foremost election experts in the country, Becker has led CEIR's successful efforts to help election officials of both parties, all around the country, ensure that all eligible voters can vote conveniently in a system with maximum integrity.

Prior to founding CEIR, Becker was Director of the Elections Program at The Pew Charitable Trusts. As the lead for Pew's analysis and advocacy on elections issues, Becker spearheaded development of ERIC, which to date has helped a bipartisan group of over half the states update nearly 10 million out-of-date voter records, and led to these states registering over 5 million new eligible voters. Before joining Pew, Becker served for seven years as a senior trial attorney in the Voting Section of the Department of Justice's Civil Rights Division, and served as a lead counsel on major voting rights litigations, including the case of *Georgia v. Ashcroft*, ultimately decided by the US Supreme Court. Becker received both his undergraduate and law degrees from the University of California, Berkeley.

David A. Bennett is Financial Officer and Treasurer for VR Systems Inc. and serves on the Steering Committee for "Investing in Elections," a research initiative conducted by Auburn University faculty for the Election Center. He is a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program.

Kim Brace is President and Founder of Election Data Services, a political consulting firm located in Manassas, Virginia, specializing in election administration and redistricting. Brace has worked with federal governmental agencies and state and local jurisdictions throughout the nation on election-related issues for over the past 40 years. He was the lead contractor and author of the Election Assistance Commission's studies in their 2004 and 2006 Election Day Survey and continued as a subcontractor in their 2008 and 2010 reports. A poll worker and chief judge since 2008, he also served as acting general registrar for Prince William County, Virginia.

Mitchell Brown PhD, is a professor in the Department of Political Science at Auburn University and is an associate editor of the *Journal of Political Science Education* (2016–2020). Her broader research agenda focuses on the empowerment efforts of marginalized communities, which she pursues through applied research. She is the author of numerous books, research articles, and reports in related areas. In addition to her work at the university, she serves as a researcher, evaluator, trainer, and consultant on applied projects around the country focusing on election administration, community building, and community-based problem-solving.

Doug Chapin is Director of the Elections Research Team at Fors Marsh Group (FMG). Chapin joined FMG from the Humphrey School of Public Affairs at the University of Minnesota, where he served as the founder and first director of the Program for Excellence in Election Administration. He also served as Director of Election Initiatives for the Pew Center on the States and was the founder of electionline.org, still the nation's premier source of nonpartisan news and information about election administration across the United States. Chapin has a Juris Doctorate (JD) from Georgetown University, a Master of Public Administration from Harvard University's John F. Kennedy School of Government, and a bachelor's degree in Politics from Princeton University.

Donetta Davidson has over 40 years of experience in election administration on local, state, and federal levels. She has served as a county clerk, Colorado State Elections Director, Colorado Secretary of State, and was appointed by the US President to serve two terms on the US Election Assistance Commission. Davidson spent eight years on the US Elections Technical Guidance Development Committee. Her experiences fuse a broad knowledge of election law, election best practices, election technologies, and actual, in-the-field experience administering secure and transparent elections successfully.

Shauna Dozier serves as the director for the Clayton County, Georgia Board of Elections and Registration for 191,000 voters in Jonesboro, Georgia. She has served as the voter education coordinator for the Georgia Secretary of State, as the assistant supervisor of elections for 55,000 voters in Rockdale County, and as the registration chief for 740,000 voters in Fulton County. Dozier earned her bachelor's degree in political science from North Carolina Central University. She is a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program.

Lauri Ealom is the democratic director for the Board of Elections in Kansas City, Missouri. Hired in 2012 as a seasonal staff member, she was quickly immersed in all departments during that year's election cycle, giving her an in-depth knowledge of all facets of election administration. Ealom is a strong believer of making elections and election administration practices inclusive and transparent to strengthen voter trust and participation in our democracy. She received her undergraduate degree from Clark Atlanta University and is also a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program.

Lori Edwards is the Supervisor of Elections for Polk County, Florida. Edwards was first elected to this post in 2000 and is responsible for administering fair elections, maintaining voter rolls, and providing voter registration services for this Central Florida jurisdiction. She is past President of the Florida State Association of Supervisors of Elections. Prior to her service in election administration, she served in the Florida Legislature for four terms, where her major projects included performance-based budgeting and restructuring of Florida's juvenile justice system. Edwards earned a bachelor's degree in business administration from Warner University and is a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program. She was awarded a professional certificate in electoral processes by the International Centre for Parliamentary Studies.

Blake Evans earned his master's degree in public administration, graduate certificate in election administration, and bachelor's degree in communication with a minor in community and civic engagement from Auburn University. He worked with the Escambia County Supervisor of Elections Office in Florida from August 2015 to March 2019. While there, he managed polling locations, trained election workers, supervised daily warehouse operations, led Geographic Information System (GIS) projects, and performed a variety of data analysis. Since March 2019, he has worked as Elections Chief with the Fulton County Department of Registration and Elections in Georgia.

Lindsey Forson is the Cybersecurity Program Manager for the National Association of Secretaries of State (NASS). In this role, she manages the association's information relationships related to cybersecurity issues in both election administration and other functions of offices of secretaries of state, collects relevant information and distributes it to

Secretaries of State and their IT staff, and staffs the NASS Cybersecurity Committee. Forson is also a PhD candidate in Auburn University's Public Administration and Public Policy Program with a research focus on security and emergency preparedness in US election administration. She has previous professional experience in government affairs for a professional association as well as in education.

Susan Gill was elected in 1997 and continues to hold the office of Citrus County Supervisor of Elections. She is a Florida State Certified Supervisor of Elections and a Master Florida Certified Professional. A past president of the Florida State Association of Supervisors of Elections, Gill is a member of the Election Center Board serving as the vice-chair. She is a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program.

Sean Greene lives in Rome, Italy, and consults on issues related to US election administration. He formerly oversaw the research of the US Election Assistance Commission (EAC), including the Election Administration and Voting Survey, the agency's biannual survey which collects the most comprehensive nationwide data about election administration in the United States. Prior to joining the EAC in 2016, Greene was a project director at the Pew Charitable Trusts, managing the research of their Election Initiatives Program.

Kathleen Hale JD, PhD, is Professor of Political Science at Auburn University where she directs its Graduate Program in Election Administration. She is the Series Editor for Palgrave Macmillan's Elections, Voting, and Technology series. Her research examines how to improve government capacity, particularly in the area of election administration operations. Hale serves on the Board of Directors of the Election Center and directs faculty involvement in the Certified Elections Registration Administrator (CERA) program. She is an active instructor in the CERA program and frequent speaker on election matters around the country. She serves as an active reviewer for journals and book manuscripts and is a member of the advisory board for the MIT Election Data Sciences Lab.

Ernest Hawkins is an election consultant. He has worked on voter registration and elections consulting and research projects in numerous election jurisdictions, including work with the New York City Board of Elections. He has taught in the Registered Election Official Certification Program offered by the Election Center. From 1980 to 2003, he was appointed Registrar of Voters for Sacramento, California. From 1976

to 1980, he served as Senior Administrative Analyst in the Registrar of Voters office. Hawkins has held numerous positions with the Election Center and has been on its Board of Directors since its inception. He has chaired the Board for the last 20-plus years, a position he retired from in April 2019. He was also their Conference Programming Director and continues to direct their Consulting Services Division. He was the National Association of County Recorders and Clerks President in 2000–2001. He has served on the Board of Directors for both the National Association of Counties (NACo) and the National Association of County Recorders, Election Officials and Clerks (NACRC). He co-chaired the NACo/NACRC Election Reform Commission, which published its recommendations in 2001. He served on the Federal Election Commission's Advisory Panel and was a member of the Advisory Board for the US Election Assistance Commission. He served on the Advisory Board for electionline.org. Hawkins holds both a Bachelor of Science and an MBA from California State University in Sacramento; he is a Certified Public Official with a concentration in Elections Administration and is a Certified Elections Registration Administrator (CERA).

Alice Jarboe recently retired from the County of Sacramento after more than 27 years of service. As Interim Registrar of Voters, she led the successful implementation of the Voter's Choice Act in Sacramento County, the largest of the five counties changing to the new "Vote Center" voting model. This model improved access to voting for all the County's residents in the June 2018 election by mailing ballots to all voters, expanding online ballot access for voters with disabilities, and establishing "vote anywhere" vote centers in place of assigned polling places. As Assistant Registrar of Voters, she helped guide Sacramento County's implementation of optical scan voting in 2004. Over the past years, she worked to streamline election activities while maintaining the integrity of the election process. She worked with the Board of Supervisors on the County's 2010 redistricting project and with the County's Disability Advisory Committee to provide online accessible voting material. Jarboe stays active in state and national election organizations and has received both State CalPEAC (California Professional Election Administrator Certificate) and National CERA (Certified Elections Registration Administrator) certifications. She also holds a Bachelor of Science degree from California State University, Sacramento.

Kamanzi Kalisa is an election policy and project management professional who served as the Director of Election Policy and Programming for the Council of State Governments from 2014 to 2018. In that role, he oversaw a national working group of esteemed and prominent elected officials, policymakers, and academics exploring cybersecurity challenges and threats impacting US elections in the states, in partnership with the Democracy Fund. In addition, he also directed the Council of State Government's Overseas Voting Initiative, a partnership with the US Department of Defense's Federal Voting Assistance Program that promoted best practices and innovative policy solutions in an effort to improve the voting process for over 5 million US military and civilian overseas voters. Previously, Kalisa directed the Help America Vote Act Program for the Georgia Secretary of State based out of Atlanta, with an $85 million budget for elections administration in 881 local jurisdictions in the State of Georgia. Kalisa holds a bachelor's degree in political science from Tufts University and a master's degree in public administration from the Andrew Young School of Policy Studies at Georgia State University.

Bridgett A. King PhD, is an assistant professor and director of the Master of Public Administration Program at Auburn University. She teaches graduate and undergraduate courses in state institutions and policy, public policy, and diversity in public administration. Her research focuses on political participation, voter disenfranchisement, and citizen perceptions of the electoral system. Formerly a voting rights researcher in the Democracy Program at the Brennan Center for Justice at New York University, she contributes regularly to the Election Center Certified Elections Registration Administrator (CERA) program.

Kelly Ann Krawczyk is Associate Professor of Political Science at Auburn University, where she directs the PhD Program in Public Administration and Policy. She teaches nonprofit and public administration courses in Auburn's MPA and PhD Programs. Her research focuses on the relationship between civil society and democracy. Her research is published in journals such as *Nonprofit and Voluntary Sector Quarterly*, *Voluntas*, and *International Review of Administrative Sciences*. She has authored book chapters and professional publications for the Governance Commission of Liberia and the World Bank.

Jill LaVine retired as Registrar of Voters for Sacramento County on March 31, 2018. She worked in elections for over 30 years, and as Registrar for 14 years. During her time as Registrar, LaVine was the co-chair of the Legislation Committee for the statewide organization, California Association of Clerks and Election Officials (CACEO), and testified at the State Capital on election-related legislation. On the national level, LaVine is a member of the Election Center an organization for election officials and has made presentations at their conferences.

LaVine continues her work with the Election Center teaching classes and as the chair of the Professional Practice Papers. LaVine has testified before Congress on the paper audit trail and at a public meeting of the Election Assistance Commission regarding the accessibility standards for voting systems. LaVine received her CERA (Certified Elections Registration Administrator) from the Election Center in 1996 and her CalPEAC (California Professional Election Administration Credential Program) in 2006.

Matthew Masterson serves as a senior cybersecurity advisor at the Department of Homeland Security, where he focuses on election security issues. Previously, Masterson served as a commissioner at the US Election Assistance Commission from December 2014 until March 2018 including serving as the Commission's Chairman in 2017–2018. Prior to that, he held staff positions with the Ohio Secretary of State's office, where he oversaw voting system certification efforts and helped develop an online voter registration system. He holds a law degree from the University of Dayton, School of Law, and Bachelor of Science and Bachelor of Arts degrees from Miami University in Oxford, Ohio.

Tim Mattice is Executive Director for the National Association of Election Officials (Election Center). Prior to his current role, he was Director of Education and Training for the Election Center from 2006 to 2014. Mattice was Special Projects Coordinator at the New York State Board of Elections from 1995 to 2006. He has extensive training and program management experience working with state agencies and local county election offices, particularly in New York State. He worked as Senior Trainer for SUNY Albany Sponsored Funds Program from 1984 to 1995. He has also done training for a major New York State corporation. Mattice has a BA degree from the State University College at Potsdam and graduate work in Public

Administration from SUNY Albany. He was awarded his Certified Elections Registration Administrator (CERA) designation from the Election Center in 2008.

Amber McReynolds serves as Executive Director of the National Vote at Home Institute and Coalition. Formerly, she was Director of Elections, City and County of Denver, Colorado. She administered elections in Denver for over 13 years and has worked in public policy and administration for over 18 years. She was named as a 2018 Top Public Officials of the Year by Governing Magazine for her transformational work in election administration. Under her leadership, Denver has been recognized by the Election Assistance Commission, Election Center, National Association of Counties, and International Centre for Parliamentary Studies for numerous innovations. She serves on the Massachusetts Institute of Technology (MIT) Election and Data Science Lab Advisory Committee, the Michigan Election Modernization Advisory Committee, City Year Denver Board of Directors, Lift Colorado Board of Directors, Democracy Fund Validation Project Advisory Circle, and formerly on the Council of State Government's Overseas Voting Initiative's Technology Committee. McReynolds is CERA-certified and holds a Master of Science in Comparative Politics from the London School of Economics and a bachelor's from the University of Illinois, Champaign-Urbana.

Robert Montjoy retired as a research professor and DeBlois Chair, University of New Orleans (2018); professor and Assistant Vice President for University Outreach, Auburn University (2004); and captain, US Navy Reserve (1995). His academic career combined teaching, research, outreach, and administration. At Auburn, he was the founding director of the MPA program (1985–1997), director of the Economic Development Institute (1994–2001), and Assistant VP (1999–2004). Montjoy has had diverse outreach experiences, such as helping Virginia legislators develop a formula for the distribution of state aid to local governments (1977–1979); coordinating the implementation of Harris v. Seigelman (1988–1990); helping to found and serving as the first president of the Alabama Technology Network, the state center for the US Manufacturing Extension Partnership (1995–2004); and serving on the government effectiveness committee of the Bring New Orleans Back Commission after Hurricane Katrina (2005–2006).He is author or co-author of numerous publications, both academic and applied. Montjoy remains active in efforts to improve the administra-

tion of elections, serving on national boards of directors for the Election Center and the Ranked Choice Voting Resource Center. He teaches in the Election Center/Auburn University professional education program for election officials, which he helped found in 1992.

Mindy Perkins serves as the president and CEO of VR Systems, Inc., a trusted provider of technology for the elections community for more than 25 years. As VR's first employee, Perkins developed the customer support, business development, and sales teams as the company expanded across seven states. VR is 100% employee-owned, and offers Voter Focus, a voter registration and elections management system, EViD electronic pollbook, as well as elections web software solutions. She is a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program.

Noah Praetz was responsible for running elections in Cook County, Illinois. He was responsible for the overall management of one of the largest election jurisdictions in the country. Each year his team served 1.5 million voters, facilitated democracy for thousands of candidates, and trained and supported thousands more volunteers. He is a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program. Praetz is an election consultant, working primarily on the Cybersecurity and Infrastructure Security Agency's election security efforts. He is Adjunct Professor of Law at DePaul University College of Law and Advisory Board Member at the University of Chicago Cyber Policy Initiative.

Tyler St. Clair holds a Master of Public Administration degree from Auburn University where he served as Election Center Fellow for two years and also completed a graduate certificate in election administration. His research focuses on topics such as electoral integrity, political parties, critical infrastructure, and the social impact of infectious diseases such as vector-borne illnesses. Prior to completing his graduate degree, St. Clair earned a Bachelor of Arts in History with a minor in Political Science at the University of Evansville. At the University of Evansville, he focused on language use by political parties in Africa, specifically how this language influenced Pan-Africanism and the development of political movements across the continent. Prior to pursuing a graduate degree, St. Clair worked as an advocacy campaign specialist, focusing on public health and environmental organizations.

Jim Terry, Kaylan Dunlap, Steve Flickinger, and Dan Woosley are with Evan Terry Associates, LLC, a firm in Birmingham, Alabama, that is dedicated to providing clients with highly professional architectural services and is also committed to the "Universal Design" concept for architectural accessibility. Their architectural projects are designed to ensure access to buildings and facilities for all people, including those with disabilities. The expert ADA (Americans with Disabilities Act) team offers detailed ADA facility surveys, plan reviews, training, expert witness, and product consulting on a regular basis to healthcare facilities, large corporations, and federal, state, and local government clients. Their work with the ADA has earned the firm a nationwide reputation as one of the leaders in the field of accessible design. Evan Terry Associates has recently developed and launched the Comprehensive Resource for the Americans with Disabilities Act (CORADA), for the purpose of helping people to identify, understand, and meet their obligations under the ADA and other access requirements. CORADA offers an online database that connects ADA requirements and official technical assistance materials developed by the Department of Justice, the Department of Transportation, and the Access Board, to other relevant information such as products, how-to videos, expert opinions, design ideas, possible solutions, training opportunities, and upcoming events.

Tim Tsujii is Director of Elections for the Forsyth County Board of Elections in North Carolina. He serves on the advisory committee for the Center for Technology and Civic Life and was involved with the ElectionTools.org project. His office was recently recognized by the North Carolina Center for Geographic Information Analysis for the implementation of a polling place wait time tracking application in the 2016 general election. He attended the George Washington University earning a Bachelor of Arts in Political Science and later went on to earn a Master of Public Affairs from the University of North Carolina at Greensboro. He is also a graduate of the Auburn University/Election Center Certified Elections Registration Administrator (CERA) program.

Virginia Vander Roest is the training and communications manager for the Michigan Bureau of Elections. She has worked in election administration for nearly 20 years, with the first 12 years being at the local level for the City of Kalamazoo. Vander Roest obtained her CERA certification in 2005 and has served on the Election Center's Task Force on Training and Education, the Task Force on the Future of Elections, and on the

Steering Committee for "Investing in Elections," a research initiative conducted by Auburn University faculty for the Election Center.

Tom Wilkey is a founding member of the Election Center and joined the Erie County Board of Elections in Buffalo, New York. He joined the New York State Board of Elections in 1979 serving as the director of Communications and Voter Education. He is responsible for the oversight of New York's 62 county election offices. Wilkey has served as an executive director of the New York Board of Elections, and as both a member and participant in numerous national committees involved in developing the National Voter Registration Act and the Help America Vote Act. Wilkey served as the president of the National Association of State Election Directors, and is a proud life member of the New York State Election Commissioners Association.

Shaniqua Williams is a student in the Public Administration and Public Policy doctoral program at Auburn University. Her research interests include social justice and equity, election administration, and African-American political behavior. Prior to beginning her doctoral program, Williams received her Master of Public Administration (MPA) with a certificate in Election Administration from Auburn University. While pursuing her MPA, her studies focused on the effect of felony disenfranchisement on black voter turnout. During her time at Auburn, she has served two terms on the executive board for the Black Graduate and Professional Student Association. Williams has been heavily involved in the mentorship of African-American undergraduate students who are interested in pursuing graduate education.

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CHAPTER 1

Introduction

Bridgett A. King, Kathleen Hale, and Mitchell Brown

Abstract As the American election administration landscape changes as a result of major court cases, national and state legislation, changes in professionalism, and the evolution of equipment and security, so must the work of on-the-ground practitioners change. This Open Access title presents a series of open access case studies designed to highlight practical responses to these changes from the national, state, and local levels. This book is designed to be a companion piece to *The Future of Election Administration*, which surveys these critical dimensions of elections from the perspectives of the most forward-thinking practitioner, policy, advocacy, and research experts and leaders in these areas today. Drawing upon principles of professionalism and the practical work that is required to administer elections, this book lifts up the voices and experiences of practitioners from around the country to describe, analyze, and anticipate the key areas of election administration systems on which students, researchers, advocates, policy makers, and practitioners should focus.

Keywords Election • Administration • Policy

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The Future of Election Administration: Cases and Conversations raises up the voices of election administrators from the local, state, and national levels across the country, as well as vendors and other experts involved in elections. Their perspectives are essential to our understanding of the democratic process, and it is vitally important that their stories are shared widely. Election administration functions have been under siege since the 2000 presidential election, and media accounts of the most recent elections of 2016 and 2018 have, by and large, contributed to a negative narrative about what happens on the ground. Wait times or long lines, voter rolls that are not accurate up to the minute, intricate processes such as election security protocols, how we handle voters who do not appear to be eligible to vote, how we determine voting districts, the time it takes to count (and recount) votes, the deficiencies of aging equipment—all of these have been oversimplified and positioned as emblems of a broken system. These stories present a more balanced view and will be used, we hope, to advance an informed conversation across the field, in the media, and among the general public.

In this book, practitioner experts discuss and reflect on some of the most important aspects of election administration today, including the influence of history on current practices, construction of the current architecture of election administration, challenges related to technology and security, professionalism of the field, and innovative tools that help the field address current and future challenges. This book is a companion book to *The Future of Election Administration*, which lays out the experiences of practitioner, policy, advocacy, and research experts and leaders across election administration today. The authors address current and upcoming aspects of election administration systems, describing, analyzing, and anticipating the key areas of election administration systems on which students, researchers, advocates, policy makers, and practitioners should focus. Both of these projects were developed out of the Auburn University Election Administration Symposium Series.

The Auburn University Election Administration Symposium Series

These books are the culmination of nearly five years of dialogue that began with a series of conversations between public administration and political science faculty at Auburn University and election officials around the country (including the leadership of the Election Center, the National

Professional Association for Election Officials) about how to gather these perspectives and present them collectively to critical audiences. The most obvious of these audiences of course include election administrative professionals in the field, the vendors who serve it, and the researchers who study it. But we also hope to reach the policy arena, where local county and township commissions, state legislatures, and policy advisors at all levels of government propose ideas and make decisions that affect election operations, as well as the media who cover this critical aspect of American democratic functioning.

The Auburn Symposium on Election Administration is a vehicle to convene an initial set of conversations between leading academics, practitioners, and advocacy groups in the field. The first gathering was held at Auburn University on September 14-15, 2015. Titled *The Evolution of Election Administration Since the Voting Rights Act: 1965-2015.* The symposium brought together a diverse set of more than 60 voices through plenary sessions, panels, and informal gatherings to examine how the field has developed over the past half century, the challenges that remain, and future trends. The Auburn University symposium series expanded in 2017, and faculty hosted *Inclusion and Integrity in Election Administration* on October 15-17, which featured the US Election Assistance Commissioners and data-driven conversations around the Election Assistance Commission's Election Administration and Voting Survey (EAVS). The goals of *Inclusion and Integrity* were to foster conversations about critical issues that impact American democratic institutions, support the development of common language across diverse professional communities engaged in the practice of election administration, and promote dialogue between those who conduct elections and those who study the way elections operate. Drawing more than 200 participants over 2 days, *Inclusion and Integrity* advanced the conversation with cutting edge (and controversial) topics including the lack of diversity in the election workforce, the difficulties in untangling financial aspects of election operations, and presentations by representatives of leading equipment and service providers in the field about security concerns and the future of voting equipment. Through 64 separate panels and plenary session speakers, participants discussed data and measurement issues around national surveys, voter access and participation, diversity, voting system vendor concerns, election professionalism, technology and security, costs and resources, measuring success, and emerging research in the field.

The Future of Election Administration Project as Companion Volumes

Our publisher encouraged us to develop two companion books to capture the range of issues and voices in election administration today. The chapters in both *The Future of Election Administration* and *The Future of Election Administration: Cases and Conversations* reflect the presentations and discussions at the October 2017 Auburn symposium. As a whole, the project identifies several key themes of common concern to election officials, policy makers, and researchers. How do we equip election administrators with the knowledge and skills to operate effectively in a rapidly changing legal and technological environment? How do we equip election offices with voting systems and operating procedures that inspire voter confidence about the integrity of election administration broadly? How do we sustain access to registration and voting for all eligible voters? Underlying all of these concerns is an intergovernmental mismatch between resources and authority that must be addressed if modernization is to take effect equitably across the states. These volumes can be read jointly or separately as stand-alone books, but our intent (and our hope) is that they are used together.

The Future of Election Administration

The Future of Election Administration addresses current challenges and the future of access and participation; challenges in professionalizing the work of election officials; and emerging and future issues in the field. Each of these is briefly described below.

Part I of the companion volume begins with an exploration of the historic components of American election administration and how these remain relevant today. Its chapters identify and analyze impediments to voting and how those have changed over time for different groups. Authors in this part also discuss the issues that present particular challenges, and offer prescriptions for policy change as well as for administrative practice.

Part II examines the professionalism of the field of election administration as an area of public service. The chapters include perspectives from the administrative professionals who run elections, professionals who work in the field as academics, and those who work as members of professional associations and other nonprofit organizations. The authors provide a historical

and contextual discussion of the development of the public service professionalism generally, and the professionalism of election administration specifically. They lay out the evolution of the Election Administration and Voting Survey (EAVS), the Election Performance Index (EPI), and the Election Administration Professionalism Index (EAPI). Some authors take up the importance of common language and common data format across the field of election systems, and specifically, the challenges in building common terminology and data formats. Other authors take up the quality and composition of the profession, including the history and development of diversity and resource availability.

Part III addresses issues that have emerged recently as either challenges or opportunities (or both), the ways in which election administrators have responded, and how they are preparing to address foreseeable challenges in the future. Authors discuss equipment, acquisition, and security. They lay out the components of election integrity and how we attempt to ensure it. Authors take up the use of audits to increase quality and transparency. Additionally, there is a discussion of elections from a comparative context as a way to compare what is happening in the US election system as we attempt to modernize.

The Plan of This Book

This volume tracks the three parts in *The Future of Election Administration*, and is comprised of first-person, practical case studies written about experiences in the field. These illustrative case studies bring forward issues addressed in the other volume through firsthand accounts of often complicated and compelling issues. Taken as a whole, the pieces speak to where we are today as a field and where we ought to and are likely to go in the future.

Future of Election Administration: Cases and Conversations

The cases in this volume are presented in three groups, loosely organized around the ways that historical practices and reforms are reflected in today's issues; the professionalization of the field and approaches to capacity building; and tools that have been developed for the field. Of course, the experiences of election professionals are multidimensional and not neatly classified into categories, and so the readings provide illustrations

that link broadly across the spectrum of the field. That said, we find these categories reflective of the key current themes in the field.

Reflections on History and Links to Reform. American election administration is rooted in more than 50 years of federal prescriptions that address practices which imposed inequities on particular groups and, more recently, a tide of technological change. Cases in this part examine these themes from a variety of perspectives and a blend of experiences.

Robert Montjoy, former Election Director of the state of Alabama and emeritus professor from both Auburn University and the University of New Orleans, discusses how the state of Alabama proceeded to implement a federal court order throughout the state on a controversial issue. He sheds light on how a small, committed group of people on a tight budget were able to make substantial improvements in election administration and pave the way for future improvements.

Thomas Wilkey, former Executive Director of both the US Election Assistance Commission and the New York state election board, works with Donetta Davidson, former Secretary of State of Colorado and Election Assistance Commission (EAC) Commissioner, to discuss the impetus behind the federal Voluntary Voting System Guidelines (VVSG), its development and evolution, and why it continues to be important today, especially as the relationship between election offices and vendors become even more critical.

Kamanzi Kalisa, formerly the Director of Election Policy and Programming for the Council of State Government's Overseas Voting Initiative, takes up the work of that organization to improve voting for overseas citizens, military personnel, and dependents, and describes the process and its challenges.

Jill LaVine, Election Director of Sacramento County California (retired), and Alice Jarboe, Assistant Registrar (retired), describe the provision of language assistance for voters who speak languages other than English. They present their approach to service provision in a large suburban county including the challenges they have faced, and how they have partnered with the community to enhance these efforts, particularly as more demands are put on their offices with the inclusion of previously uncovered languages.

Bruce Adelson, former lawyer for the US Department of Justice, spent a significant portion of his career investigating election administration complaints across the country. Here, he discusses his work on evaluating accessibility issues for poll sites and voters. He recounts problems he has

seen, principles for addressing those problems, and considerations for the field. Attention to accessibility is only expected to increase as an essential aspect of election administration as the voting population ages.

Cybersecurity has also emerged as an essential aspect of election administration. Matt Masterson, formerly a US EAC Commissioner and currently serving as a senior advisor for the Department of Homeland Security's (DHS) cybersecurity unit, discusses cybersecurity from a national perspective. He presents what DHS has done since the designation of elections as critical infrastructure in 2016, and what they hope to achieve in the future.

From the Voting Rights Act of 1965 to the present, election practices have reformed significantly to expand the franchise to all eligible voters. Public attention to election operations has not expanded to include the diverse perspectives of staff and the vendors who serve election jurisdictions. And yet, the lack of staff diversity and the relatively negative media treatment of equipment vendors may contribute to loss of public confidence in the overall election process. Lauri Ealom, Election Director in Kansas City, Missouri, writes about her career and diversity in election administration and its importance for enhancing voter experiences. She discusses the central place of a diverse election office to enhance official understanding of voter needs to create programs and enhance implementation to meet those needs. Shauna Dozier, Election Director of Clayton County, Georgia, continues this discussion in a case study that tracks her experiences in rising through the profession as a young election official to her work today, reflecting on the changing demographics of voters and election officials. Mindy Perkins, President and CEO of VR Systems, Inc., presents the current public relations challenges facing election equipment vendors. She details a firsthand account of the vendor experiences in serving customers and maintaining public confidence under conditions of system stress and heightened public scrutiny.

The current election administration environment is chock-full of changes in voting methods and discussions about which methods are more effective in achieving policy goals. Lori Edwards, Supervisor of Elections in Polk County, Florida, broadens this conversation by discussing the financial challenges presented by policy change and highlights concerns that are not obvious in the current conversations about election administration reform.

Of course, change in election practice is not limited to American elections; structures and operations in other countries inform our

understanding of the benefits and limitations of what we do in US election jurisdictions. Kelly Krawczyk, Associate Professor at Auburn University details her observations of elections in Ghana and discusses the trade-offs between efficiency, transparency, and integrity and what we can learn for the US system from an international perspective.

Professionalizing the Field and Building Capacity. Election administration is a relatively recent arrival to the professional scene within the broader field of public service. Local offices face challenges in building capacity within the intergovernmental relationships unique to the field, and education and training programs have emerged to provide both content knowledge and practical training. Cases in this part discuss these efforts from the perspective of state and local election offices, graduates of university-based programs and professional training associations.

Ernie Hawkins, former Election Director of Sacramento County, California, and Chair of the Election Center Board of Directors from 1999 to 2019, discusses the importance of training, communication, and peer sharing for the field of election administration. He describes the advent of the Election Center and his experiences in communicating with public officials about the complexities of the field.

Lori Augino, Election Director for the state of Washington, discusses how she has transformed the state election office to improve election administration across the state. Using principles of authentic collaboration, power sharing, and streamlined communication, she illustrates how the office has increased the impact of state-county interactions and enhanced consistency and quality of elections in counties across the state through certification, training, and other processes and tools.

The discussion of the state role in building capacity through training is continued by Virginia Vander Roest, Training and Communications Manager, Michigan Bureau of Elections. She discusses the Michigan training program and the benefits that it brings to local election jurisdictions, as well as the challenges in serving more than 1000 counties and townships.

University-based curriculum for the election administration field has emerged, first through graduate certificate programs at Auburn University, and subsequently through certificates at the University of Minnesota. The Auburn program focuses on graduate education and this volume includes the experiences of several of its Master of Public Administration (MPA) and PhD students and recent graduates. Lindsey Forson, Cybersecurity Program Coordinator for the National Association of Secretaries of State

(NASS), tracks her journey through reflections about how she became interested in the topic through her doctoral program training, and how that interest is converging into a career dedicated to advocacy and support. Blake Evans, formerly an Election Coordinator in Escambia County Florida (and now Elections Chief in Fulton County, Georgia), discusses the transition from being a Master of Public Administration student with a focus on election administration into the actual position and what information he needed coming into the job. Auburn University graduate students Tyler St. Clair (MPA Program Election Center Fellow) and Shaniqua Williams (PhD Program) discuss their experiences in Nigeria for the 2019 presidential election, and in participating in that experience.

Professional certification in election administration has been well established through a partnership between the Election Center (also known as the National Association of Election Officials) and Auburn University's graduate program in election administration. Tim Mattice, Executive Director of the Election Center and former training director for the New York State Board of Elections, chronicles the evolution of national certification for election administrators through the Certified Elections Registration Administrator (CERA) program and its subsequent iterations for election equipment and services vendors (Certified Elections Registration Vendor (CERV)) and election monitors (Certified Elections Monitor (CEM)). The themes of these experiences are augmented by a discussion about education and training from Doug Chapin, a longtime advocate for election administrators and now working at the Fors Marsh consulting group.

Tools for the Field. As the field of election administration has become more professionalized, examples are emerging that illustrate how to accomplish process improvements, leverage technology, and use data to its best advantage. Cases in this part reflect experiences of election officials and other professionals with customer service, organizing to meet cybersecurity requirements, tools that can enhance capacity for infrequent but critical procurement and redistricting decisions, accessibility improvements, the utility of the EAC's Election Administration and Voting Survey, and the value of data integration tools in meeting current challenges.

Amber McReynolds, former election official from the City/County of Denver, Colorado, and current Executive Director for Vote-at-Home, an advocacy group promoting mail balloting, provides advice for election administrators about how to improve processes by adopting an office-wide customer orientation to the work that election officials do, which she

thinks will enhance the voter experience and by extension the quality of voting in the US.

Tim Tsujii, Election Director in Forsyth County, North Carolina, discusses the creation of a line management tool based on commercial off-the-shelf technology. Through illustrations of the pilot program and further evolution, he shows how it can be used to improve communication with voters to increase voter satisfaction and participation.

Noah Praetz, a former election official with Cook County, Illinois, and currently a contractor for DHS, discusses the challenges that cybersecurity protocols pose to election officials at the local level. He offers tools for establishing protocols that address the key dimensions of local operations, and that draw upon new national institutional architecture around technology security in election administration.

Procurement of major election system hardware and software does not occur frequently enough for most election officials, many of whom conduct elections using equipment and technology purchased years ago. David Bennett, Treasurer and Financial Officer of VR Systems, Inc. and former state procurement expert, discusses the procurement process from multiple perspectives, with an emphasis on the challenges of purchasing technology and how established processes can frustrate local and state election offices in getting the results that they are seeking. He presents ways in which election officials can build capacity to improve their technology acquisition processes.

Also relatively infrequent but critical is the process of drawing district and precinct lines. Kim Brace, President of Election Data Services, illustrates how to use Geographic Information System (GIS) tools to improve the work that election officials do. He lays out the history and attendant problems of precinct line maps and placement of voter residences. Brace implores election officials at all levels to educate policy makers about the negative impact of some of their redistricting practices on efficient and accurate administration of elections.

The staff at Evan Terry Associates, Inc., a firm that specializes in accessibility, continue the discussion of accessibility and poll sites. They use their experiences working with election offices in New York to provide advice for election jurisdictions across the country about how to resolve common physical barriers for voters with disabilities, communication and etiquette considerations with these voters, and universal approaches that can help election officials work with all voters.

Last, but not least, electronic datasets occupy a particular space in election administration. The national EAVS database and corresponding reports produced by the EAC provide one lens for understanding the strengths and limitations of data flowing through local election jurisdictions to state offices and then to the EAC and the field. Sean Greene, consultant and former employee of the EAC and Pew Center on the States, discusses the value of the EAVS today from a national perspective. Susan Gill, Supervisor of Elections in Citrus County, Florida, adds to this conversation with a view from the local level, discussing the challenges election officials have responding to the EAVS.

David Becker, Executive Director and founder of the Center for Election Innovation and Research and formerly with The Pew Charitable Trusts, closes out the volume with a case that traces his development of the Electronic Registration Information Center (ERIC) and its contribution to improving the quality of data that states use in maintaining voter registration lists. ERIC streamlines processes that states can access to synthesize voter registration data along with data from multiple sources, ensuring the accuracy of electronic voter registration databases.

In sum, these case studies represent the collective wisdom of people who have developed a significant body of professional expertise about the issues facing election administration today. They have worked in a variety of roles in American elections and their perspectives are informed by a host of experiences. Our contributors include local election officials, state election officials, national government officials, academics, students in graduate programs, equipment vendors, consultants, advocates, and representatives of third party groups that represent associations of election officials and other related constituencies. Nearly all of the contributors have served in multiple roles across government and the election system more broadly. Many were selected as election officials through direct public elections; others have been appointed by elected officials. Together, the collective wisdom included here provides us all with a more complete understanding of how to improve elections in the US and how to move the field forward in a way that enhances public trust, ensures integrity, and is efficient, accurate, and transparent. Elections are the way that we measure democracy, and election administration is the machine that runs elections; these voices are at the heart of that machine.

PART I

Reflections on History and Links to Reform

CHAPTER 2

Inter-Organizational Implementation: Carrying Out a Federal Court Order in Alabama

Robert Montjoy

Abstract Administering elections requires coordination among independent parties. The implementation of a 1988 court ruling in Alabama was an extreme case of this proposition. State and local officials, volunteer trainers, Auburn University, and the Alabama Cooperative Extension Service worked together in a compressed time frame to carry out new procedures for recruiting and training poll workers. The case illustrates the need for and the results of interorganizational cooperation in unusual circumstances.

Keywords Intergovernmental • Poll workers • Training • African Americans

Elections require the interaction of multiple agencies and individuals, sometimes in unexpected ways. This is one of those cases. In 1988, a federal judge issued a ruling in the case of *Harris v. Seigelman* that required

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changing appointment procedures and training for Alabama poll workers. Implementation involved the offices of the governor, the attorney general and the secretary of state, the plaintiffs, the probate judges of 65 counties, Auburn University, Alabama Cooperative Extension Service and 63 volunteer trainers. By an unusual confluence of circumstances, I became the coordinator for implementation.

The Setting

In the 1980s, Alabama's election system was decentralized and fragmented. At the county level, four different public officials and the local party chairs had various responsibilities for voter registration and elections. The important ones for this case were the probate judges, who were responsible for training poll workers and who served, along with circuit clerks and sheriffs, on the boards that appointed poll workers from lists to be provided by political parties. All of these officials were locally elected. No office at the state level had a role in their selection or authority to make rules governing procedures. The state attorney general could issue nonbinding interpretations of law.

In the early 1980s, Secretary of State Don Seigelman set about trying to strengthen his role in the election process. Lacking formal authority to issue orders, he obtained a grant to develop and demonstrate instructional materials for use by local officials in training poll workers. He contracted with Auburn University's Center for Government Services (CGS) to implement the grant. As an associate professor of political science and assistant director of CGS, I managed the contract. This gave me an opportunity to learn about Alabama election law and to interact with state and local election officials. In 1987, when Glen Browder became secretary of state, he asked me to join his staff, part-time, to assist in election-related matters. We worked out an arrangement whereby his office paid Auburn for my time.

Meanwhile, an important court case was developing. It arose in 1984 when two African Americans brought suit against the governor and attorney general over several issues related to elections. Among the most important was that blacks, particularly the poor and elderly, were intimidated by white poll workers. US District Judge Myron Thompson ordered that the case would be a class action including, as plaintiffs, all black citizens of Alabama and, as defendants, the authorities for appointing poll workers in all but 2 of the 67 counties. At the request of the court, the parties negotiated an agreement to appoint black poll workers

in proportion to their presence in the voting age population. Very little happened, partly because Alabama had no administrative mechanism to effectively implement the agreement statewide.

In 1988, the plaintiffs returned to Judge Thompson seeking enforcement of the earlier ruling. In this case, they complained about the lack of black poll workers and about a state law that limited voters' ability to obtain assistance at the polling place. There was now a new governor and Don Seigelman had moved on to become attorney general. They wanted to settle the case. Secretary of State Glen Browder agreed to become a defendant and manage the implementation. The parties worked out a plan that became the basis for a new court order. I became the coordinator for the project.

The Case

The court order required not only that the defendants cease discriminatory practices, but also that they undertake a positive program to overcome the effects of past discrimination. The program would include the following:

- Training materials for poll workers that included instructions on allowing assistance to voters under new procedures that were consistent with federal law.
- Biracial teams of volunteer trainers who would conduct schools for poll workers in each affected county.
- Certification of the names of those who completed the schools to the county appointing authorities.
- Appointment of black poll workers in sufficient numbers to achieve racial balance.
- Removal of restrictions in state law limiting poll worker appointments to citizens living in the precincts where they would serve and whose names were submitted by political parties.
- An oath for poll workers that included a pledge not to discriminate.
- A complaint/evaluation form available to voters in each polling place.
- A poster that would be displayed at each polling place explaining voters' rights to cast a "challenged ballot," a precursor under state law to today's provisional ballot.

The program would last through 1992, three election cycles.

The Training and Certification Program

There were just over two months between the court order and the 1988 general election. The court-approved plan left many practical questions unanswered, and it was clear that the defendants could not run back to federal court to get clarification every time an issue arose. So, the governor, the attorney general, the secretary of state and the plaintiffs each agreed to appoint a representative to an oversight board that could make decisions as the program progressed. As the secretary of state's representative, I served as the coordinator of the board. One of the best decisions that we made was to schedule a regular meeting each week until the fall election. We could always cancel the meeting if no decisions were needed.

Complicating the 1988 schedule was the fact that poll workers had already been appointed under state law. The oversight board agreed that the training program could not be expected to affect the appointment of poll workers in the first year of implementation. Instead, we reached agreement with the probate judges, who were by state law responsible for training and integrating new training materials into regular county schools for poll workers. The secretary of state contracted with CGS to develop the training materials and manage the program. The instructional program that we had developed under the earlier grant became the basis for the new one, allowing a quick response. We still had to modify the material to cover the new procedures for assistance in voting and to print copies for use in the schools. Meanwhile, the plaintiffs and defendants recruited volunteer trainers, who attended the instruction on how to use the training materials. The trainers, in turn, participated in 129 county schools for poll workers, handed out the new material and highlighted the changes in law and procedure.

After this first implementation, the oversight board held a meeting in Montgomery, the state capital, to get input from the appointing boards, all of whom were invited to attend. We used this information in the design of the first full iteration of the program in 1990. This time we held the schools in the spring so that we could certify attendees to the appointing boards in time to influence their choices of poll workers. The idea of certification raised the question of whether there should be a test to provide a measure of competence. The oversight board, including the plaintiffs' attorney, decided to include a simple test. It would consist of ten questions drawn from the material provided to the prospective poll workers, who were encouraged to use the material to answer the questions. Thus, the

test measured the ability to read and apply instructions. In order to get the tests graded in time, we used scan sheets that were shipped to Auburn for reading. We would learn that some attendees, especially the elderly, were not familiar with scan sheets and had difficulty filling them in.

In order to ensure uniform presentations around the state, we created a "sound and slide" show. This was before the time of computer-based programs and Liquid Crystal Display (LCD) projectors. We used 35 mm slides and cassette tapes to give an overview of normal polling place procedures. We also provided a handheld flip chart (Fig. 2.1) on how to deal with unusual situations, including the need for assistance in voting.

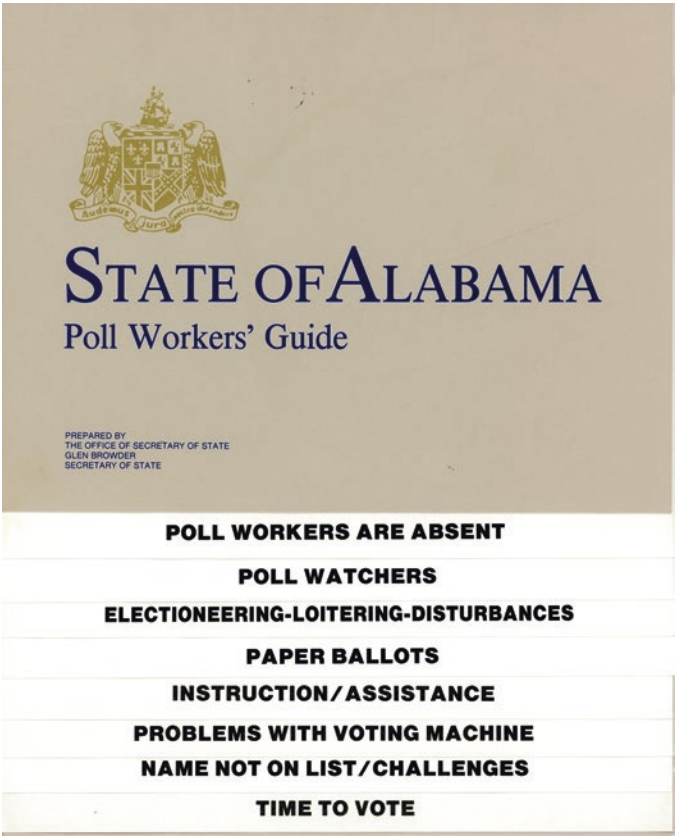

Fig. 2.1 State of Alabama poll workers guide

The idea was to teach the basic polling process and provide job aids to cover the major exceptions that could occur. The open book test was designed to give poll workers experience using the job aids. The probate judges or their representatives covered voting equipment and any other county-specific issues. Counties used different voting equipment—paper ballots, Automatic Voting Machines (AVM) and Shoup lever machines and, in one case, punch cards.

This plan required a substantial local effort. We coordinated with the probate judges to find locations and to set dates for the schools. Yet we needed additional local support for things such as providing and setting up audio-visual equipment, receiving and distributing instructional material, and collecting the tests and forwarding them to Auburn. For this purpose, we turned to the Alabama Cooperative Extension Service (ACES), which had offices in each county. As a land-grant university, Auburn housed ACES, and the director agreed to help us at no cost to the program because of their public service mission.

Meanwhile, we had to recruit and train the trainers. As before, each member of the oversight board was tasked with providing a list of names. Persons on the list were invited to attend one of seven train-the-trainer schools around the state. Those who attended were asked to conduct schools in one or more counties as part of biracial teams. Because the plaintiffs wanted to demonstrate a break from traditional county election administration, trainers were not scheduled to teach in their home counties. They would be reimbursed for travel and given a standard meal allowance, but not paid for their time. A total of 85 trainers, 63 volunteers plus project staff, conducted 145 workshops and administered tests to 13,616 prospective poll workers. Almost all (97 percent) of those who took the test passed and had their names certified to the appointing boards. The boards were then able to appoint racially balanced teams of poll workers and satisfy the requirements of the court order. The program was repeated in 1992 in substantially the same fashion.

Lessons Learned

The circumstances of the court-ordered training program were unique and unlikely to be repeated. Nevertheless, I think there were a few lessons that can be used in other settings.

Communication was very important. We tried to keep all parties involved and to learn about and respect the constraints of local authorities.

Being able to get decisions in a timely manner was imperative. Unexpected developments occurred throughout the program and the project team had to be able to respond quickly. The creation of the oversight board and the pre-scheduling of weekly meetings proved to have been essential.

Volunteers could be responsible partners in public service. They were difficult to schedule because of time and travel demands, but once they accepted an assignment, they almost always fulfilled it. There were a few cases of automobile breakdowns; the trainers had to use personal vehicles and travel out of their home counties. Yet there were no cases in which a volunteer simply failed to show up without notice. And because the trainers were assigned in teams and we had backups available in project staff, we were able to conduct all schools, although with only one trainer in some instances.

Coordination was critical. The many different parties involved and the tight time constraints forced project staff to spend many hours scheduling and rescheduling to meet program commitments. Coordinating the volunteers was especially challenging because we were asking them to break their normal work or family routines and travel away from their communities, sometimes at night. We had not counted on the cost in terms of staff time to manage that part of the program.

The level of cooperation between state and local governments, between former opponents in the court case, and between representatives of different political parties was surprising and very encouraging. Of course, a federal court order is a big stick, but it never had to be used.

Election officials often face unexpected demands that exceed the resources of their own offices. Outside organizations and individuals can sometimes help in surprising ways. As has been demonstrated more recently in natural disasters like Hurricane Michael in 2018, individuals and offices from outside the normal realm of election administration can rally to meet unusual needs, in which case having a mechanism for coordination is even more important than usual.

CHAPTER 3

Reflections on the Creation and Implementation of Voting System Guidelines

Donetta Davidson and Tom Wilkey

Abstract For some, it may be difficult to remember a time when we had no electronic voting equipment—no scanners accepting paper ballots, no touch screens—whereas the voting system today is the result of decades of work by federal agencies and groups of election officials about voting systems and technology. We participated in these efforts over several decades in different roles over time. This case reflects our observations and experiences about how the current certification system came to be, and reflections about how improvements can be made.

Keywords National Association of Election Directors • Election Center • Voting system guidelines

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The Role of NASED

One of the keys to the current certification system is the role played by NASED, the National Association of State Election Directors. Formed in 1989, NASED is the national professional association of state chief election officials in the states, the District of Columbia, and the US territories. Both of us were involved in the formation of this group, and both served as one of its presidents during the early years (Donetta in 1994 and Tom in 1996). Around this time, it had also become obvious that standards would be needed for electronic voting equipment that was already in use and beginning to become more widely popular. The idea of standards had been discussed for about a decade, including a study commissioned by the Federal Election Commission (FEC), and its report in 1983 from the National Clearinghouse on Election Administration (housed within the FEC) that performance standards for voting systems were necessary.

NASED's role in standards began during conversations with the FEC as the federal agency was developing standards, which were published in 1990. NASED agreed to serve as the certifying agency for the new voting system standards. This meant developing the first handbook for voting system accreditation, which NASED did in 2001. It also meant accrediting a number of testing laboratories, and these were initially known as Independent Testing Authorities (ITAs), then voting system testing laboratories (VSTLs). The labs that were accredited evolved from labs that had been involved in similar work for the federal government.

During this time, the Election Center also played a key role. The Election Center is the only organization established for training election administrators and other election professionals. It offers professional certification through its Certified Elections Registration Administrator (CERA) program, which is operated in partnership with the Auburn University Graduate Program in Election Administration and its Master of Public Administration program. When NASED agreed to take on responsibility for voting system certification, it set up an Accreditation Board. The Election Center stepped in to assume the role of secretariat for NASED and the Board. These links provided election officials with a ready-made opportunity to share information widely across the Election Center membership, which reached local election officials and others in the election community who were not members of the national associations of state election directors or secretaries of state, NASED or NASS (the National Association of Secretaries of State). The Election Center continued as the NASED secretariat for more than 25 years, until 2018.

In 2002, the Help America Vote Act (HAVA) transferred responsibilities of the National Clearinghouse on Election Administration out of the FEC to the newly formed Election Assistance Commission (EAC). Related to voting systems, the EAC was tasked with the responsibility of developing new voting system standards that would now be known as voluntary voting system guidelines (VVSG), and implementing a national testing and certification program for voting system hardware and software. HAVA established a new set of administrative groups around voting system standards that replaced the functions that NASED had performed and expanded their reach. These included the Standards Board, the Board of Advisors, and the Technical Guidelines Development Committee (TGDC). The Standards Board has 110 members: 55 state election officials are selected by their respective chief state election official and 55 local election officials are selected through a process supervised by the chief state election official. The Board of Advisors has 35 members who are appointed by various organizations of state officials related to election operations, including NASED and the Election Center. The TGDC has 15 members including the chair chosen by the National Institute of Standards and Technology (NIST) and the other members chosen by NIST and the EAC.

Both of us were involved quite a bit during the transition to the EAC and afterward. Tom was appointed in 2005 as the first executive director of the EAC, and Donetta was appointed in 2005 as a Commissioner, and Donetta chaired the TGDC during her tenure; both stepped down in 2011.

The Help America Vote Act

When the Help America Vote Act (HAVA) was adopted in 2002, it created a situation where things were actually backwards if what we wanted were modern voting systems that satisfied a set of national standards. Instead of beginning with the creation of the first set of VVSG standards and requirements, and getting those out so that manufacturers could build the equipment, the approach was to tell everyone they had to have new equipment by a certain day. States in turn bought old, legacy equipment that some states are still using today.

At the time, there was a conflict between accessibility and moving away from old punch card type machines. The law was clear and had more about accessibility than security. At NIST there was an expert on accessibility, and there was another expert on the disability community on the TGDC. Together they pushed for accessibility to be a part of HAVA so

that every voter could vote independently without any help. That was clear from the beginning of the creation of HAVA because it had to be done.

During the development of HAVA, it seemed like direct recording electronic (DRE), touch screen machines, would be better for accessibility. The activists were sure that they were not secure or accurate. The press picked up on this immediately and influenced the public's understanding of the DRE machines. Many counties went to paper ballots as a way to protect themselves from bad press and public opinion. Paper activists could be fairly aggressive at times. A few years ago, Donetta came out to observe one of the election audits in Colorado. When asked why she voted years ago not to require paper when Colorado uses paper today, Donetta remarked that some states had laws that allowed them to buy equipment that didn't use paper. She didn't want those states to be forced to buy entirely new systems. Further, at the time, the procedures and rules for handling paper were not secure across the states and counties.

The TGDC

The TGDC faced several challenges including forming its membership and starting up a process. Both of these would be easier today because something is already in place, but at the time the structure was just a shell. At the EAC, we fought for a vendor to be on the TGDC, though a lot of people did not like that. But we thought we needed at least one vendor. Ed Smith was on the committee for the TGDC to represent all of the vendors, and he did a good job representing the entire community, not the particular vendor he worked for.

The process for developing the rules for equipment through the TGDC was hard and took a long time. We found that NIST had extensive knowledge, and that just blew us away. It was also challenging because it was easy for technical experts to talk over your head. They are scientists and work on testing on all kinds of things from rockets to election systems. It took a great deal of time for experts and election officials to find common ground on how to talk about things, and this improved over time.

There was one conversation about bar codes that was quite controversial. Election Systems and Software (ES&S) actually got caught putting bar codes on the ballot that related to the voter. The activists on the committee were up in arms about this. One advocate proved that she could track someone down to the voter name through the bar codes. ES&S changed this obviously, but bar codes are still controversial. They are still allowed, but cannot be used in ways that track them to the voter.

Part of the reason that creating the VVSG standards took so long at first was because we had to develop the process. Now each stage takes less time because the process is already in place. At one point, we had standards ready but we couldn't adopt them because we didn't have a quorum. Once they got a quorum, the commissioners decided to add more things before adopting them, which created an even longer delay. They did this because technology had changed, and then the new ideas had to go back to the Standards Board for approval. There is also a comment period, and additional time was added because of the federal Paperwork Reduction Act. The Paperwork Reduction Act was created before the widespread use of computers and requirements still applied at the time that caused delays.

The EAC timing for certifying equipment also took a long time at first. Some of what looked like delay on the part of the EAC was really due to the approaches taken by the vendors. Equipment vendors were bringing in equipment for testing before even testing it themselves and, not surprisingly, problems would be found. As a consequence, we at the EAC published a certification chart that showed the different stages of the process and how much time each took. This allowed observers to see that what looked like an EAC delay was in part because the vendor had to go back and correct problems which took them months to fix. Now vendors are so much better about checking all of their equipment and testing it before the equipment goes in for federal testing.

There is a vendor committee now, as well as an activist committee. NIST and TGDC members come to those meetings so everyone can hear them. The process has improved by having these groups involved. The TGDC is small and not much of its work is open to the public—they can come, but there are no comments from the audience. So it's important to have these committees and to listen to what the people on the committees have to say. This gives more input which helps the process.

The Advisory Board has not been very manageable because there are so many people on it. The Board has become wiser about how they do things, working in subcommittees, because when the whole committee is all together, the people with the loudest voices have the room. The representation on this is also important. In some states the Secretary would go, but if the Secretary wasn't that involved in the election side of the work in that state, the Secretary would send a staff member. This works in some cases, but not in others. And the rules require that no state can have two members of the same political party, so that also affects who is on the Board.

Choosing New Equipment

Today, election system manufacturers will often have a variety of machines so they can work with the different demands from the states. These demands emanate from state law, the preferences of the procurement officials and preferences of the public. In addition, some states require certification from both the EAC and the state office. This costs vendors almost double. Some states like California have even more rigid testing standards. Certification costs are paid by the vendors and can be significant; the certification cost depends on how long it takes the system to be certified. The cost can range usually from $50,000 to $500,000, though in one case it went as high as one million. Small changes to state laws can cost the vendor about $50,000 in certification costs for each occurrence.

State associations are also involved in the equipment selection and certification process. Some states have strong associations and others do not. When Colorado Secretary of State Wayne Williams wanted to adopt a new system, he pulled in the activist community, the county clerks who are the elected officials responsible for running elections, and the county commissioners. These groups all had the opportunity to weigh in on the vendors and give their opinions. Some of the vendors listened to the opinions of these groups, and some did not. This is what graded some of the vendors down in this process. Some of the counties tested these systems and we watched that process. Each state manages its voting system selection process differently. Some secretaries of state get very involved in this and have strong opinions; in other states, local election officials have more say.

Conclusion

The national VVSG system has taken more than 30 years to develop to this point, and the entire voting system environment is entering a new phase. The states are looking at new equipment to replace the systems purchased with HAVA funds; virtually every system has ended its useful life in one way or another. New trends are coming, with the use of commercial equipment such as iPads and ePollbooks, and new processes like ballot on demand where voters are issued onetime use access cards that are activated to the voter's ballot style. With new methods come new and easier ways to assist all types of voters with disability. Security is also a concern in a new way, now that election systems are part of the US critical infrastructure. What we have seen through the development of this system, from the

earliest stages with NASED, is that the election community continues to operate in a way that incorporates the information from technical experts along with the experiences and opinions of election officials who use these systems. From our experiences and observations, it would not have been possible to develop our current system without the many critical conversations that brought forward the input of local and state election officials.

CHAPTER 4

Improving Voting for Overseas Citizens, Military Personnel and Their Dependents

Kamanzi Kalisa

Abstract US citizens living overseas as well as active duty military personnel have unique and long-standing challenges in exercising their right to register and cast their vote by absentee in US elections—lack of physical mobility, residing in remote areas, varying laws and policies, as well as limited access to voting information and the actual voting process. The complex US overseas election system is further complicated by the administrative role played by all 50 states, the District of Columbia, and the territories. This case study will explore the work of The Council of State Government's Overseas Voting Initiative from 2014 to 2018 and the initiative's efforts to improve the voting process for American military personnel, their families, and civilian citizens residing overseas.

Keywords Working group • Research • Best practices • Policy • Data • Technology

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US citizens living overseas have unique and long-standing challenges in exercising their right to register and cast their vote by absentee ballot in US elections. Many active duty military personnel lack mobility and live in remote areas abroad. Compared to US citizens living stateside, overseas citizens have limited access to the voting process. The US overseas election system is complex in design and administration as it involves the coordination of federal, state, and local governments to carry out their legal responsibilities. The time associated with transmitting ballots overseas and back as well as varying laws, policies, and procedures administered in the 50 states, the District of Columbia, and territories are other realities facing overseas voters.

To help improve the US military and overseas voting process, The Council of State Governments (CSG) in 2013 partnered with the US Department of Defense's Federal Voting Assistance Program (FVAP) to launch the CSG Overseas Voting Initiative. FVAP is mandated by federal law for establishing and maintaining a program to assist all eligible US service members and overseas citizens in registering to vote and casting ballots. The primary purpose of this $3.2 million initiative is to improve the voting process for American military personnel, their families, and civilian citizens residing overseas. CSG is uniquely qualified for this effort as it maintains decades of experience convening forums that foster the exchange of insights and ideas to help state officials shape public policy. Founded in 1933, CSG is the only national membership organization serving all three branches of state government and offering unparalleled regional, national, and international opportunities to network, develop leaders, collaborate, and create problem-solving partnerships.

Serving as CSG's Director of Election Policy and Programming for over four years, I oversaw the convening and support of bipartisan working advisory groups of state and local election administrators focused on policy, technology, and survey analysis that promote evidence-based best practices as well as facilitate data standardization policy solutions affecting over 5 million US military and civilian overseas eligible registered voters. Previously, I served as the State of Georgia's Help America Vote Act Program Manager for the Georgia Secretary of State in Atlanta, with an $85 million budget for election administration in 881 local jurisdictions in the State of Georgia. The Help America Vote Act is a federal election reform law which provides funding for states to modernize voter registration systems, improve election administration, expand disability access and voting technology for voters stateside as well as for those residing overseas

(e.g., members of the seven uniformed services, members of US Merchant Marine, US citizens employed by the federal government residing outside the United States, and other private US citizens residing outside the United States). In that role, I had the privilege and honor of hosting international election observation delegations representing Rwanda, Japan, Ethiopia, and China that involved firsthand demonstrations of election administration, election campaigning, voting, counting and tabulation processes, and other issues related to the overall electoral process in the United States.

The CSG Overseas Voting Initiative Policy Working Group was created to examine military and overseas voting recommendations from President Barack Obama's Presidential Commission on Election Administration as well as other successful programs and practices across the country. This working group was a very important starting point for the Overseas Voting Initiative as it identified military and overseas voting barriers that election administrators could focus on and proactively address in their official roles without the creation of new laws or expanding their office budgets. The policy working group's recommendations focused on voter communication, voter registration, and US military community engagement.

With respect to voter communication, the policy working group recommended that election administrators communicating with US military and overseas voters use clear, concise, accessible written and verbal communications at every step in the voting process. Furthermore, election information and materials should be designed in a manner that makes it as easy as possible for all voters to understand. Specific suggestions include providing checklists to the voter explaining step by step how to vote and return ballots would help improve the overall voting experience and process. Also, state policymakers should refrain from prescribing specific language for voter communications into statute and instead provide local and state election officials with some degree of flexibility to tailor communications as circumstances require. The working group also recommended that election administrators make effective use of websites and social media (Twitter, Instagram, LinkedIn, etc.), create more user-friendly electronic ballot return envelopes, communicate to voters when the ballot application is accepted, and provide as much information as possible to voters about what is on the ballot.

With respect to voter registration, overseas citizens and the dependents of military and overseas citizens registering to vote can be difficult because of variations in state voter registration requirements and postal reliability

problems in certain countries. The policy working group recommended that if states provide online voter registration for their voters then they should incorporate the same service for overseas and military voters. When this CSG effort first began, 29 states administered online voter registration systems, now 38 states provide this service and the number is climbing. The Federal Post Card Application was initially created to simplify the US overseas voting experience by condensing a voter registration request and ballot request into one singular form for use in federal elections. Since then, states have accepted the form but have placed varying validity timeline limits. The working group recommended that all states treat the Federal Post Card Application as a permanent request for voter registration and establish a default validity period for the ballot request.

With respect to US military community engagement, the policy working group featured and recommended existing and successful state and local partnerships across the country as examples to follow. Successful and innovative partnership examples include direct outreach that involves the recruitment of military spouses to work and volunteer in local and state election offices. Another example is, a focus on social media and the sharing of FVAP videos and written content on local and state election administration websites as well as working with military installations and their voting assistance officers (Fig. 4.1).

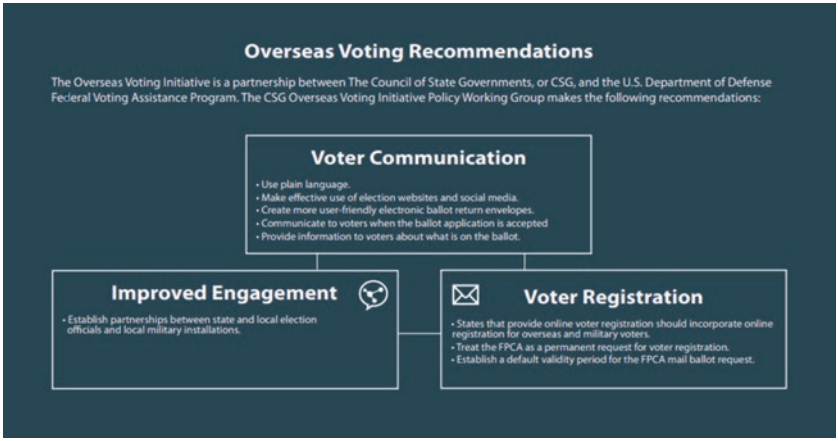

Fig. 4.1 Overseas voting initiative

The CSG Overseas Voting Initiative's Technology Working Group was created to explore the role of technology in the military and overseas voting process and determine how technology can be used to make further improvements. States have long been innovators in the use of technology in elections. Identifying and disseminating best practices has long been a strength of CSG and this working group built upon the existing work pioneered in many states. The technology working group's recommendations focused on unreadable/damaged ballot duplication, common access card/digital signature verification, and data standardization/performance metrics.

In all 50 states, the District of Columbia, and territories, certain qualified voters can cast paper ballots using a vote by mail or absentee voting process. Many of these voters are in fact US military and overseas voters. According to the US Election Assistance Commission's Election Administration and Voting Survey, in the last midterm national election (November 2014), more than 14 million absentee ballots were cast nationwide. Through the course of a ballot's delivery from a voter overseas to their local election office stateside for tabulation, a ballot can be torn or damaged, accrue coffee spills, wrinkles, and tears. Ballots can also be filled out using inappropriate marking devices. With respect to unreadable/damaged ballot duplication, the technology working group recommended that states and local jurisdictions administer a ballot duplication process for unreadable and damaged ballots that is appropriate for the number of paper ballots they process. Also, whether a jurisdiction uses a manual or an electronic ballot duplication process for unreadable and damaged ballots, there should be clear procedures employed that ensure auditability. Technologies for ballot duplication of unreadable and damaged ballots should be easy to use and promote transparency not only for election officials, but for external observers as well.

The US Department of Defense is the largest employer in the world. The Common Access Card (CAC) also commonly referred to as the CAC is the Defense Department's standard identification for active duty personnel, civilian and contractor employers. It also meets the security requirements of two-factor authentication as well as digital signature and data encryption technologies. The technology working group recommended that all states should incorporate the use of CAC cards in the US military and overseas voting process by accepting the card's digital signature as a voter identity verification requirement. States and local election

officials should also coordinate with FVAP to develop CAC digital signature educational resources to better inform voters about the technology and process.

There is an abundance of election information and data being tracked and maintained in the states that can be used to understand the effectiveness of the US military and overseas voting process. A long-standing problem has always been that states track, categorize, and identify voting behavior and corresponding transactions differently which doesn't allow for an accurate apples-to-apples comparative analysis. To address this issue, the technology working group recommended that state and local election officials work with FVAP and the US Election Assistance Commission to adopt and implement the Election Administration and Voting Survey Section B Data Standard, recognizing that it is the best vehicle for standardizing military and overseas voting data being tracked in the 50 states, the District of Columbia, and territories. The working group also recommended that CSG and state election officials should work with FVAP to identify a method or partner agency that can support automated data collection and validation to ensure the continued use of this standard that solely focuses on the US military and overseas voting community. Lastly, FVAP should continue to work cooperatively with the US Election Assistance Commission and the National Institute of Standards and Technology to establish data repositories and related standards to support the long-term sustainability of the Election Administration and Voting Survey Section B Data Standard.

All the work detailed in this article made significant progress in improving the US military and civilian overseas voting process. However, additional priorities were identified throughout the course of the work. Beginning this year in 2019, The Council of State Governments and the Federal Voting Assistance Program are partnering again to educate state policymakers about overseas voting issues. This new five-year, $3.9 million effort will further help uniformed services personnel and other US citizens overseas vote in federal elections. This new partnership will allow state policymakers to better understand FVAP's mission and election administration best practices serving US military and overseas voters. In addition, the partnership will access better data to evaluate the impact of federal election laws as well as the market viability and usability of electronic blank ballot delivery systems in use in the states.

CHAPTER 5

Assisting Voters, Language Access, and the Role of Election Administrators

Jill LaVine and Alice Jarboe

Abstract While the federal government under the 1965 Voting Rights Act (VRA) Section 203 requires election jurisdictions to provide language assistance to voters, there is no financial support and not enough detailed information from the government to make this a success. Election jurisdictions must find the location of the voters through extensive outreach programs, mailings, and media efforts. This is a very costly undertaking and often still does not reach the voters who really need the assistance. If a jurisdiction does not meet the needs of their voters needing language assistance, they can be sued by the Department of Justice (DOJ). Community organizations and advocacy groups can be helpful in identifying voters who need assistance, but often they have their own agenda. Election officials want to assist voters for the right reason—so the voter can be an informed voter. But this can be difficult unless we have the information we need, the financial support, and without the constant fear of being sued.

Keywords Language access • Sacramento County • Language support • Language advocacy organizations • Federal language requirements

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Voters who are non-English speakers and whose native language is one that has historically been associated with discrimination at the polls (Asian, Alaskan Native, Native American, and Spanish) are entitled to language assistance under the Voting Rights Act (VRA). Sacramento County has been covered under VRA Section 203 for Spanish language for almost 20 years and for Chinese language starting in 2011. In addition, any California jurisdiction that has a non-English speaking population of any language that meets a 3% threshold is also covered under state law. For Sacramento, this means that there are five languages in addition to Spanish and Chinese that have language coverage, including Hmong, Korean, Punjabi, Tagalog, and Vietnamese. For our county's 500 polling places, about 200 of them are staffed with a Spanish speaker. We have about 20,000 registered voters who want materials in Spanish.

The concept of providing language assistance seems relatively simple—provide voting materials to voters in English and another language—but it is a complex undertaking. On a primary ballot, for example, the possibility of 7 languages times 9 parties at each polling place means there could be 63 different versions of every ballot. The cost is high both in potential for precinct worker confusion and in budget requirements.

Who and How This Work Is Done

The work of providing language assistance is part of everyone's job inside an election office. Outreach takes the lead on this, but registration staff has to correctly enter the information, another unit needs to prepare the ballot design, and another unit develops the precinct worker training. Still other units are responsible for adjudicating cast ballots, budgeting for the additional language support, and overall management of the language access program. There are also community groups that assist with registration and identifying needs. For example, the CAPITAL (Council of Asian Pacific Islanders Together for Advocacy and Leadership) group has meetings and election office outreach staff attend to encourage registrations. Much of this work is done by outreach staff after normal work hours.

One of the hardest parts of offering language assistance is planning the staffing needs for language speakers at the polls on Election Day. California law requires that a precinct worker is there the entire time, from opening to closing. In addition, we have an internal assessment to test workers on languages, and our outreach staff also tests the potential workers. Members of the Chinese community in particular will volunteer to come for a few hours

to work on Election Day but not for the entire day. County and state employees like social workers are more helpful as they will work through Election Day and they are already certified in the language. If a potential voter comes to a polling place that does not have a language speaker to help them, we have a phone service, LanguageLink, a live language translation service that serves a voter in most languages, in a three-way conversation. The election office pays for this phone-based service out of the election budget.

Issues with Outreach

One of the most challenging issues that election officials face in language coverage is identifying the voters who need language assistance and understanding their cultural needs. In some cases, people will read the same language but speak it differently (e.g., Mandarin Chinese and Cantonese Chinese), so, although these voters use the same printed ballot style, they need different audio versions. There are also differences in demand by age of voters. The older generation wants their ballots in Chinese; the younger generation wants their ballots in English.

The Department of Justice (DOJ) has suggested that the election office search its voter registration rolls for voters with particular surnames in order to identify group members and their locations. It doesn't work—people intermarry, and change names, and surnames are dispersed across the county. We can use birthplaces because we get that information on the California voter registration form, but if they come to the US at an early age, they speak English. Birthplace information is not on the federal voter registration form, so if voters register through the federal form the information is not available. The Geographic Information System (GIS) staff take the birthplace information from the Census and mail information to voters asking about language preference. When that information comes back, registration staff marks the voter's file with their preferred language, and then input this into a GIS map so we can also identify which polling places will need that language support.

In the case of identifying those who may need Spanish assistance, we mailed out response cards to all voters—and have identified 500 from the cards. In addition, we had outreach staff at their community activities and groups. The resources we've invested in trying to find out who needs this assistance is tremendous.

We also had to quickly learn Chinese cultural norms before we could go to their outreach events. Colors, clothes, particular greetings matter at

certain meetings—for example, we avoid wearing white because it is tied to death. We also learned there was a Chinese group that supported one political cause in China and they wanted us to advertise in their newspaper, while another group said, "Don't you dare or we'll not participate with you anymore." So we had to choose which newspaper would reach the largest number of voters in the most positive way with a limited budget.

Another issue occurs when we place the Chinese translation portions on our ballots. We put all three languages (English, Spanish, and Chinese) on one ballot and on all of our materials. If we place the Chinese version first, people get angry and contact us about the wasted cost. If we don't put all the languages on one card then we may not reach that one voter and the DOJ comes after us.

Outreach

Outreach staff have a tough job. There is a mismatch between the population the Census captures and the actual market for language assistance within the community. The Census data doesn't provide enough specific information about the particular people who need language assistance. This makes our job harder, and if we are noncompliant, we can be sued. The data from the American Community Survey (ACS) is organized by Census tract, however, California doesn't use Census tracts for voting precincts, they don't match up with district lines. ACS now reports population estimates from Census data every five years instead of ten, which will likely increase demands for language assistance and also give us more information.

Marketing to those who may need language assistance is also very challenging. We don't have a local Chinese paper or radio or TV station; these media outlets come out of San Francisco. As a result, anything we advertise or promote has to be generic; outlets won't pick it up if the information is specific to Sacramento only. There are no outlets for Tagalog, Vietnamese, Hmong, Korean, or Punjabi.

The Role of Advocacy Organizations

In the beginning, we didn't have information on where the people who needed assistance were concentrated, and advocacy groups pushed us to do this work. In response, we mailed everything in two languages. The expense related to this practice was significant, as anything election related

has to have a court certified translation in compliance with California Election Code.

Other advocacy groups regularly monitor our polling places to make sure we are doing what we are supposed to as well as what they want us to do. They provide us feedback after elections noting what needs to be improved, and sometimes this is helpful, though at other times the advocates are not correct and have their own agenda. We work with these groups to improve their feedback by attending meetings in which they train their observers. California Election Code is complex and the observers often do not know what to look for.

Costs

We do not have enough support to do this. We are pulled very thin. A Chinese speaking staff member has to work at the front counter, do outreach in the community, work at precincts, check voter registration cards, figure out how to enter that into our system, speak to the press, and go to citizenship classes to teach about voting. This is also true for our staff Spanish speaker. But we do not have the resources to pay them for all of these levels and types of work—all we can do is give them a language differential.

While language assistance is a federal requirement, there is no federal financial support. Support for language assistance administration comes through a statewide association of counties, the California Association of Clerks and Election Officials (CACEO). For uniformity in the state to comply with the language requirements, we have CACEO as a sounding board. We also run our procedures by our Secretary of State (SOS) for blessing on implementation, but they can't provide their official stamp of approval for legal reasons. While we are not required to provide all election materials in the languages that meet the 3% state threshold, we are to provide a translated ballot and attempt to find a poll worker to help. We are required by the SOS to report our efforts. The state is supposed to tell us which precincts voters who need language assistance are in based on the ACS data, but they don't.

We are providing language assistance to too many people—or at least it seems that we are providing language assistance to many more than need it or will use it. The Census determinations force us to provide Chinese language assistance but we have had only 500 voters request assistance. Without considering individuals, we are spending 80% of our money trying to reach the 20% of the voters who may need assistance. In 2013,

implementing outreach and assistance for Spanish language speakers cost the county $200,000. Our expense in that year for Chinese language outreach and coverage was equivalent. The expense for other languages is even greater.

How Should We Fix This System?

It is most important to have language assistance on Election Day. During registration, staff have more time, but on Election Day, there is immediacy. It is a given that the election official will provide the opportunities. It makes sense to make the voter responsible for requesting language help, rather than making elections officials responsible for finding the voter.

There are also multiple voting system issues that come up when adding another language. The voting equipment that we use hasn't caught up to our needs because until just recently we only had one or two languages. Even though our voting system allows us to use different languages, font to support all the languages needed wasn't available or certified by California for use on the system. The vendors were not prepared for the multiple numbers of character-based languages on the same piece of equipment.

In thinking about the issues related to adding Chinese, for example, our voting system was not state-certified for Chinese. This means that our office in conjunction with the voting system vendor had to have the system retested and go back to make corrections. We were under a deadline to get this done but we couldn't get the Chinese piece to work. We really need some type of DRE (direct-recording electronic, or touch screen) machine for something like that—optical scan is simply too limited for the volume and types of languages we have now. But DREs have largely been banned in the state—we are only allowed one per polling place. In our county, we do have Ballot Marking Device (BMD) machines that anyone can vote on, which helps. We have a classification of "voters with specific needs" that covers language and disabilities and we have monthly statewide meetings to work on polling place surveys, accessibility issues, and language requirements, and so on.

A BMD has limitations with the different languages and the required audio files. To address this, we have to increase our BMD machines at each polling place, which increases the cost significantly, and we have to identify where to send the BMDs or send every type of equipment to every polling location. When we add the fourth language, we won't be able to do this, and we will have to target where to send equipment; this is where we get sued.

There is also a fear of the Department of Justice and the language advocates. When we get sued, it is the county that covers the cost of the lawsuit. It is easier to enter into a consent decree, but then we are bound by the terms of the decree for a specific term even if the issues are resolved or become nonissues in the following years. We never know where the advocates are coming from, and no matter how closely we work with them—even above and beyond what is required in code—it is never enough.

We would like to get rid of the fear and actually just provide the service to those who need it. This is the right thing to do and We would like to do it for that reason.

CHAPTER 6

Accessibility Issues for Poll Sites and Voters

Bruce Adelson

Abstract Polling locations that are accessible to all voters is a cornerstone of elections being free and fair for all voters. Although we often think of accessibility as it relates to voters who have physical disabilities, accessibility can also be related to the comfort that voters feel when entering the place that has been designated for in-person voting. This case discusses these definitions of accessibility and others that have been addressed by legislative action and decisions made by courts in the United States.

Keywords Voting • Accessible • Equal • Convenient • Comfortable

Voting accessibility is essentially about making voting easier, open, and available. Voting accessibility is often used as a term of art to mean accessibility to people with disabilities, without the presence of physical impediments to voting. Such impediments can be ballots without accessible alternatives for blind people and polling place doorways too narrow for wheelchairs.

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Voting accommodations for people with disabilities essentially provide equal, level playing field access to voting so as not to infringe on "fundamental voting rights" and cause "irreparable injury" to voters.[1]For voters with disabilities, accessibility to voting and voting accommodations include talking voting machines for blind voters, as a federal court decided on the eve of the 2016 presidential election. Failure to provide such machines "and all other accessible voting technology available for persons with disabilities" violates federal guarantees against disability discrimination.[2]

Accessibility, though, encompasses more than disability accommodations. Accessibility means openness, availability, the quality of being able to be reached or entered or easy to use. In this definitional context, accessibility is impacted and influenced by considerations of race, language, and culture. More than questions of legality and voting requirements, such as those of the Voting Rights Act of 1965,[3] accessibility in voting also includes the very subjective notion of a voter not being discomfited when entering a polling place.

This subjectivity of comfort played out in real time in 2004, when a rural Southern county attempted to move a polling place to a building that had been a Ku Klux Klan (KKK) headquarters as recently as the 1970s. Although the county reportedly did not realize the history of its proposed new voting location, the same county immediately realized the problematic effect such a polling place shift would have on African-American voters, especially those old enough to have lived through this county's KKK and Jim Crow eras. These voters were so upset and adversely influenced by having to choose whether to vote in this problematic building or not vote at all that many planned to stay home on Election Day. This ostensible polling location was thus not "accessible" in the term's definitional sense to those voters, which is evident from the county's reversal of its decision to move the polling with the encouragement of the US Department of Justice.

[1] *League of Women Voters of North Carolina v. North Carolina*, 769 F.3d 224, 247 (4th Cir., 2014).

[2] *Gray et al., v. St. Louis City Board of Election Commissioners*, Case No. 4:16-cv-01548, (W.D., Mo., 2016). The author was the Americans with Disabilities Act consulting expert for plaintiffs in this case.

[3] 42 U.S.C. §§ 1973 to 1973aa-6.

Anecdotal examples abound of such accessibility affecting and influencing decisions whether or not to exercise the fundamental right to vote. The following anecdotes are among the most telling.

The San Carlos Apache Nation is located in southeastern Arizona and encompasses three Arizona counties—Gila, Graham, and Pinal, with the Pinal County portion virtually uninhabited.

In 2002, the U.S. Census Bureau determined[4] through population analysis that Gila and Graham Counties must provide election information in the Apache language under Section 203 of the Voting Rights Act.[5] Election information as defined by Section 203 includes: "any registration or voting notices, forms, instructions, assistance, or other materials or information relating to the electoral process, including ballots…. [The 203 requirements] should be broadly construed to apply to all stages of the electoral process, from voter registration through activities related to conducting elections, including, for example the issuance, at any time during the year, of notifications, announcements, or other informational materials concerning the opportunity to register, the deadline for voter registration, the time, places and subject matters of elections, and the absentee voting process."[6]

For Native American and Alaska Native languages that are historically unwritten, as is Apache, only oral assistance concerning election information and material is required.[7]

"Under Section 203, which applies nationwide, a variety of triggering formulas assess minority group size and high rates of illiteracy (measured by educational completion below the fifth grade) to determine language-assistance coverage. As originally enacted and as amended in 1982, Section 203 mandates language assistance in a state or political subdivision in which more than 5% of the voting-age citizens are members of a language-minority group and are limited-English-proficient, and where the illiteracy rate for that group exceeds the national illiteracy rate. To address the problem of excluding coverage for large numbers of language-minority voters who might not meet the 5% test in many of the country's largest

[4] Section 203 determinations for 2016 - Federal Register / Vol. 81, No. 233 / Monday, December 5, 2016.

[5] 42 U.S.C. § 1973aa-1a.

[6] 28 Code of Federal Regulations PART 55 et seq., Implementation of the Provisions of the Voting Rights Act Regarding Language Minority Groups.

[7] Id.

population centers, Congress amended Section 203 in 1992 to impose an additional test focusing on absolute numbers: a jurisdiction with a language-minority group constituting a population with over 10,000 voting-age limited-English-proficient citizens and possessing an illiteracy rate above the national average is also covered."[8]

In 2002, when Gila and Graham Counties faced new Apache language Section 203 obligations, voting and election participation among the San Carlos Apaches was low. Neither county provided Apache language assistance for voting and elections prior to the 2002 Census Bureau determination. The Department of Justice (DOJ), which enforces Section 203, launched a nationwide education and enforcement program concerning the 2002 Section 203 language requirements. Gila and Graham counties were among the counties selected by DOJ for inclusion in this program.[9]

DOJ worked with both counties and recommended various innovations to foster Section 203 Apache language compliance. These included hiring new county election workers who spoke Apache; hiring new county poll workers who could provide Apache language assistance at the polls; implementing joint voter registration efforts by both counties, led by election workers who spoke Apache; and launching a joint county publicity program informing the San Carlos Apache Nation of the counties' new Apache Language Election Information Programs.

Gila and Graham counties publicized and held a joint Voter Registration Day in Bylas, the San Carlos capital, in the Bylas community center. The particular Voter Registration Day was selected to coincide with a well-known community event—a free farm animal veterinary clinic.

Inside the center, both counties set up their voter registration materials in two small rooms adjacent to a large open space filled with veterinarians, nurses, operating tables, and large, noisy farm animals. The clinic and voter registration event ran all day, with both featuring steady streams of human customers. Many San Carlos Apaches registered to vote for the first time in their lives, with new voters speaking approvingly of the counties' new Apache language efforts.

The most compelling scene played out on the main road facing the center's front door. Walking to the clinic to register to vote for the first

[8] *Language Accommodation and The Voting Rights Act*: Angelo N. Ancheta; Santa Clara University School of Law.

[9] The author was the DOJ attorney responsible for Gila and Graham Counties' Section 203 compliance.

time ever were five women, tribal elders, in traditional San Carlos Apache dress. They had lived on the reservation all of their lives. They lived through the 1948 Arizona Supreme Court decision that struck down previous court rulings that infringed upon Native Americans' right to vote.[10] As the 1948 Court decided, "In a democracy, suffrage is the most basic civil right, since its exercise is the chief means whereby other rights may be safe-guarded. To deny the right to vote where one is legally entitled to do so, is to do violence to the principles of freedom and equality."

These five tribal elders, who spoke Apache and could speak and read little English, had never felt comfortable registering to vote, in large part because of the language barrier. Now, with Gila and Graham Counties providing voting and election information and assistance in their native language, the women finally felt comfortable enough to register to vote. Voting had become "accessible" to them. They and other San Carlos Apaches became first-time voters that day, signing up amidst the tumult of multiple large animal surgeries in the summer of 2002.

The Apache Language Election Information Program had its desired effect that year and subsequently the number of Apaches who registered to vote and voted in Gila and Graham County elections increased. The nascent Apache language election program substantially contributed to the newly accessible election process on this Indian reservation astride these two rural Arizona counties.

In the early 2000s, a small town in the Deep South (population under 2000 people) held elections for aldermen to represent residents on the town council. The town elected aldermen from four districts. One district was majority African American. For purposes of this chapter, we will refer to this district as District 4.

This district had not elected an African American to serve on the town council since the nineteenth century. Through Jim Crow, racial violence, discrimination, and impediments to voting, black people living in this town grew less and less interested in exercising their franchise.

As voting restrictions eased and voting rights for all citizens became part of federal law, African-American voters in District 4 continued to register to vote and turnout at election time in low numbers, much lower than comparative rates for white residents.

Black District 4 voters revealed one reason for their voting disinterest. The District 4 poll workers had largely remained the same for decades,

[10] *Harrison v. Laveen*, 196 P.2d 456 (Ariz. 1948).

going back to the 1960s when towns and cities in this state routinely devised invidious methods for discouraging and preventing African-American residents from exercising their voting rights. Black people commented about how they encountered Jim Crow reminders every Election Day, when the same group of 1960s era white poll workers staffed the District 4 polling place. Instead of having to relive past racial injustice, they decided to just stay home and not vote.

This changed for one early 2000s Election Day when a new white election commissioner took office on the town's election board. The new commissioner told the author he wanted to increase African-American voter participation, especially in District 4. A town resident all of his life, he had long wondered why black voters turned out to vote at such low rates, especially with the town's overall African-American town population exceeding 30 percent.

He asked the author for ways to increase African-American District 4 turnout. Recommendations and ideas were shared. Finally, the suggestion was made to hire more African-American poll workers to create a different, more welcoming, and more "accessible" election experience. The commissioner embraced the idea, although he noted that many longtime poll workers may not react well to sharing Election Day responsibilities or being replaced by new election workers. The commissioner also recognized that some other town residents may not take kindly to his plan. However, he wanted to try, with some anxieties perhaps assuaged by support from the Justice Department.

The local election board implemented this small change so that on Election Day, there were new faces manning the voter registration tables at the District 4 polling place. African-American voter turnout increased dramatically that day, perhaps to record levels of participation. After the votes were tallied and the results certified, District 4 voters had elected an African-American alderman for the first time in over 100 years.

As discussed, accessible voting most often refers to voting accessibility for people with disabilities. However, accessibility should be viewed as more all-encompassing and far-reaching. Indeed, the following description of accessible voting from the United Kingdom's Electoral Commission well captures this all-encompassing breadth:

> Accessible Voting for All --- Anyone who's eligible to vote on polling day should be able to do so in a confident manner. Polling station staff [sic] are trained to provide assistance to any voter who asks for it.

The key terms of accessible to all, and being able to vote in a "confident manner" speak volumes about voting being equally open, available, convenient, and comfortable. The anecdotes recounted in this chapter are not unique. Similar experiences occur in communities across the United States with unfortunate regularity. Perhaps when "accessible" voting is embraced in its full definitional meaning, the occurrences of inaccessible voting will recede and disappear into history.

CHAPTER 7

Protecting Election Infrastructure: A View from the Federal Level

Matthew Masterson

Abstract Securing elections and democracy in the United States requires adaptation and innovation in the field. The adoption and implementation of new strategies and procedures is not without risk. Ensuring the system is solvent and secure, once viewed solely under the purview of states and local governments, the security of elections in the United States has evolved to be an issue of concern and investment at all levels of government. The increased involvement of federal agencies in the administration of elections in the United States has created new opportunities for the development of intergovernmental relationships and resources. Discussed in this case is the role of the Department of Homeland Security in election administration, as experienced by one election administration expert.

Keywords Cybersecurity • Vendors • Security • Information • Intergovernmental relationships

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I began my career in elections as Special Assistant/Counsel to Chairman Paul DeGregorio, working with the US Election Assistance Commission (EAC) updating the Voluntary Voting System Guidelines (VVSG) through the Voting System Testing and Certification Program, and working with the laboratory accreditation program. From there I moved to the Office of the Secretary of State for Ohio, and then from 2015 to 2018 I served as a Commissioner for the EAC including serving as its Chairman in 2017. Today I work as a senior advisor for the Department of Homeland Security, leading their election security work. The unifying theme in my career in US elections is equipment and technology.

I tell people all the time the best part of my job is that I wake up in the morning and know the importance of my work. I don't lack motivation because I work with incredible people to maintain the integrity of our democracy. My inspiration goes beyond the "God Bless America" democracy space—my commitment is to be able to help people to identify and manage risk in the election process, to continue to modernize that process, and to improve services to voters. I believe that the single worst thing that could happen to US elections is for us to move away from improving services and modernization because we are afraid of risk. We need to assess and manage that risk in order to move forward. This is what my work in elections is about.

Today, election systems have been classified as critical infrastructure, and that has had a significant influence on my work. From my perspective, elections have always been a part of the critical infrastructure of the US because they are essential to maintaining American democracy. Being officially part of critical infrastructure since 2016 means that we, the Department of Homeland Security, can prioritize the efforts of the federal government to support the work of state and local officials, all with the overarching goal of providing state and local election officials and their private partners the tools that they need to identify and mitigate risk.

Improvements in Election Security, 2016–2018

Securing elections is not new to election officials. They have long worked to ensure the security and integrity of the process. However, following the 2016 election and the known attempts by sophisticated actors to interfere with our elections, there was a paradigm shift. Improvements in cyber readiness began happening almost immediately after the designation of elections as critical infrastructure. Our work to date has focused around

information sharing, providing support and services, coordination across the federal government, and Election Day monitoring and sharing. Together these activities have significantly advanced our response capability across the nation.

First, we built information sharing capacity across the elections community to understand the general risk environment, specific threats, and how to mitigate these. We did this through the development of the Elections Infrastructure Information Sharing Analysis Center (EI-ISAC), created in February 2018. Between February and November 2018, we were able to provide all 50 states and over 1400 local jurisdictions with general information and specific technical indicators around election security and a path for reporting back to the EI-ISAC. This system gives states and localities an avenue to report information to us, which has resulted in the most significant improvement to date.

In 2018, state and local officials robustly shared this information, including technical information and potential threats from social media campaigns. For example, officials in the State of Vermont provided us technical indicators that occurred when targeting their system. We shared this information widely, and several states investigated this in their own systems and reported back that they saw this activity as well, and as a result, we were able to release an alert nationally. This process took about a week, and was very successful and is exactly how this cycle is supposed to work. As good as the information from the intelligence community is, the best information came from election officials on the ground.

Another example comes from the deployment of Albert sensors. These sensors are part of an intrusion detection system collecting information about traffic targeting election infrastructure and alerts related to known, malicious actors. Prior to 2016 there were only a handful of state election infrastructures covered by Albert systems, and in these cases they were indirectly covered through other state systems that were connected to elections, not through the election infrastructure specifically. By Election Day 2018, 46 states and 90 localities had Albert sensors covering their specific election infrastructures. These sensors gave us a good understanding of the baseline of activity that was targeting election infrastructure; this will help us moving into 2020 to determine when things are out of the range of normal.

Second, we also provided direct support and services to states and localities. As part of the critical infrastructure designation, election officials and their private sector partners are prioritized to receive Department of

Homeland Security (DHS) services. These include scanning for known vulnerabilities, on-site penetration testing of systems, phishing campaign assessments over 12 weeks with increasing complexity, cyber resilience reviews of cyber architecture, and resilience reviews with advice on how to build more resilient physical security of election offices and polling places. All of these services are free and intended to identify risk and empower officials and vendors to mitigate those risks. A majority of states and several hundred jurisdictions have taken advantage of at least one of these services.

Third, we enhanced coordination across the federal government. In 2016, we learned that federal agencies were not prepared to work together around cyber threats to elections. DHS took the lead to coordinate agencies and organizations at the national level. This included the Federal Bureau of Investigation (FBI), the Department of Defense (DOD), the National Security Agency (NSA), Cybercom, the Office of the Director of National Intelligence (ODNI), the National Institute of Standards and Technology (NIST), and the EAC. A significant improvement comes out of this—our ability to take intelligence, put that in a format that can be shared, and push that information out nationally through the EI-ISAC, the EAC, the National Association of Secretaries of State (NASS), and the National Association of State Election Directors (NASED). These groups are committed to pushing that information to local offices for information sharing. We also offered security clearances to state chief election officials (CEOs) and two of their designees in each state to enhance our ability to share specific threat and general intelligence to help election offices prepare and respond. Throughout 2018, we utilized these clearances to provide classified briefings to state election officials regarding the threat environment around elections and steps they can take to manage risks and share information with the community. To date, most of this information has actually involved election disinformation rather than targeting of election infrastructure. Having the ability to push this information down to the election community is an incredible resource that was not there before the designation of elections as critical infrastructure.

Finally, on Election Day for major elections, this work is also about communication and coordination. As an example, on Election Day 2018, we stood up an operation center in Arlington, Virginia, with representatives from DHS, our other federal partners, NASS, NASED, the Republican National Committee (RNC), the Democratic National Committee (DNC), voter protection hotline, and private sector vendors, all to share and respond to information. As part of this, we established a cyber-situational

awareness room with over 600 active state and local election office partners across the country who shared information about cyber activity. We investigated and shared information with election officials around the country as necessary through this mechanism. This also included contact with social media companies throughout the day. As another example, in Ohio a voter released a video through social media of a piece of election equipment presumably flipping votes. The officials from that county (Franklin County) were able to quickly identify that specific piece of equipment, diagnose the problem (paper jamming), and contact the state with information about the problem and the fix of it. Then, we were able to provide feedback through social media and the general media to shut down misinformation and educate the public about what was actually happening. This is a great example of our information sharing capabilities.

Improvements in Election Security Moving Forward

Coming out of the 2018 midterm elections, there are a number of areas that can be improved. Nationally, we did a good job developing our information sharing system, but we still need to work on engaging people at the local level, especially local election officials in the mid- to small-sized jurisdictions. We need to double down on what we refer to as our "Last Mile" project to reach these offices. The Last Mile will allow states to push information to counties and other election jurisdictions about risks to their specific election systems, possible mitigations, and state specific checklists to improve their cyber hygiene. We need to improve and educate those mid- to small-sized counties, townships, and cities so we can reach everyone. We still have over 7000 jurisdictions that we need to find a way to partner with and support.

We also need to work on "maturing" our discussions about risk. It is challenging to have open and mature discussions about risk because we are afraid of negatively impacting the public's confidence in the process. But we need to have open, honest, and transparent conversations with all of the relevant stakeholders, including county commissioners, state legislatures, and other funding and policy bodies. The message we need to distribute is "Here are all of the great things we were able to do given current funding levels, but if we had more resources and regular investment, here is what we could do." We need to educate policy makers at all levels about what it means to meaningfully invest—in training, technology, upgrades, and information technology (IT) personnel. Some states are doing this.

For example, Washington, Illinois, and Florida are deploying cyber navigators from state offices to counties that have little to no IT support—this is a tangible risk management technique that states can implement that is not just buying new equipment.

Finally, we need to both continue and broaden our engagement with private sector partners. Many counties are reliant on their vendors. Consequently, we must build strong, trusting relationships with all of the vendors involved in elections across election sub-systems. We must and will invest time and resources to build trust with this group of election stakeholders.

CHAPTER 8

Diversity in Election Administration: Understanding and Serving Your Voters

Lauri Ealom

Abstract Successful election administration requires that election administrators not only know and follow the appropriate local, state, and federal policies but also understand the population of constituents they serve. Across the field, there is considerable variation in the professional path taken to a career in election administration. This case presents the experience of one election administrator's path to election administration and the ways in which personal and professional experiences within and outside of election administration can prepare election administrators to successfully foster relationships with constituents and adopt and implement approaches to administrative decision making that engage the community; cultivating buy-in and trust.

Keywords Understanding elections • Understanding your voters • Professional preparation • Experience for elections

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During college I worked as a part-time event planner and after graduation I transitioned to full-time. We planned conferences, special occasion/theme parties, luncheons, weddings, receptions, and conferences for doctors, all over the country. At the Kansas City Board of Elections (KCEB), we serve as the event planners for elections. Envision a party where you have 150 parties going on all over the city simultaneously with 230,000 partygoers. You have to provide each of the parties/locations with a waitstaff, signage, a DJ, tables chairs, and, sometimes, security. A well-planned logistical setup is required to ensure that the flow of the environment is best for all of the participants/voters. It's imperative that the location is easily accessible for all.

What we do is logistics. We plan the election from the point of origin to consumption (voting) in alignment with statutory requirements. We oversee the entire process. We create the ballot which can include issues from the state, city, and of course, candidates. We get the information about the candidates running and vet them, an effort we collaborate on with the county prosecutor to successfully complete. We make sure candidates are registered voters in the jurisdiction that they are running for office. We check the validity of the signatures provided to have candidate names and ballot issues included on the ballot. In addition to the federal and midterm elections that people are most familiar with, we also conduct and manage many types of elections. These include church elections, union elections, school board elections, statewide elections, transportation development districts and community improvement district elections, to name a few. We are always preparing—always preparing—for the next task just as life prepares you for where you are going.

I grew up in Kansas City. It was the 1970s and I was one of two minority students in my elementary school. In that environment, I learned how to navigate in adversity. I think that is what made me who I am. I see color. I see differences, but that does not inhibit me from really wanting to get to know people and embrace everyone's differences. I learned that at a very young age and I am grateful for that experience. When I was younger, I wondered why my parents would move me to a place where there was only one person who looked like me. As a teenager I recognized it was one of the most valuable experiences I've ever had. It taught me how to be, who I am, and how to reach across the table even though you may be different. It is a skill that is invaluable in my current position.

In this industry, it's about all the different political parties. I represent the Democratic Party but I reach across the table and I'm able to work with all the parties. It is my desire to know and understand people. That

desire is what drove me as I moved on to college and into my professional life and it continues to this day. When it was time to go to college, I chose Clark Atlanta University (formerly Clark College) a Historically Black College or University (HBCU) in Atlanta, Georgia. I chose Clark Atlanta University (CAU) because I had spent most of my life around people that were not like me. I knew that in order to be a well-rounded person, I needed to be around kids like me who had similar backgrounds, core values, and home environments.

After I graduated from CAU, I was a lobbyist for Ford where I was highly engaged in a lot of legislative efforts; things that were not in keeping with who I am. I felt like I wasn't helping anybody, I was merely helping the company. One part of my job that I really enjoyed was the management of the endowment fund. That responsibility allowed me to make large donations and participate in community engagement. At one point, they closed the Kansas City office and I went to the Union Station office to work in communications and marketing, I was there for six months and was laid off due to budgetary constraints. I then moved to New York. I stayed there, working for a record label with one of my friends from CAU, until my mother became ill. I moved back to Kansas City several days prior to 9/11. When I returned to Kansas City, I became interested in human behavior. I was hired as a Qualified Mental Retardation Professional, QMRP. I created plans that helped home care providers understand how to provide the person they were taking care of with the best quality of life experience. I felt like I had a special gift with people who had special needs. That experience allowed me to tap into a different side of myself. I became more compassionate and less spoiled. I saw people who were less fortunate than myself in a different light. From there, I went into education. I was a college guidance counselor at Frontier School of Excellence. Initially, I was hired as a kindergarten teacher and shortly after was moved to the high school. While there, I created a library, Leaders-R-Readers program, formed a campus chapter of the College Leadership Readiness and Preparedness program, and served as the chair for National Honor Society. In this role, I continued to think about human behavior as I worked with some students that others found to be challenging. What I learned is that every place that you touch, every environment that you experience is preparing you for where you are going or are supposed to be.

While I was there, one of the things I realized was that the environment was very political. The international teachers could speak their native language, but the students were forbidden to speak their native tongue. Of course, I didn't agree with that nor did I agree with most of the rules set

forth by my international colleagues. I was always ready to express my objections. After seven years, I left the school. I didn't want to work anywhere that the children were looked at as merely numbers. While working at the school I took the children home with me: their issues, their challenges. There were students who took their lives. On one occasion, I didn't check my mailbox at school and one of the students who committed suicide had left me a note. I didn't think I was cut out for this. I enjoyed teaching and working with the students, but the day to day was draining on me. I loved the students but it was too much and I was looking forward to something that would allow me to release as opposed to internalize.

One of my friends was opening a sports bar so I dusted off my college bartender hat and agreed to tend the bar. While I was working at the bar, I was able to talk with retired police chiefs, retired firemen, up-and-coming elected officials—I got to be in an environment where I could have open conversations with a variety of public administrators and elected officials who make decisions for our city. Although I had started working at the Election Board as seasonal staff, nobody knew this and being in the bar I was able to engage in open conversation that otherwise may not have happened.

As seasonal staff, I initially worked in Voter Services, which is the first line of communication to the voter. Working at the Board allowed me to see the other side of elections. With my experience as a lobbyist, I knew how to conduct legislative rewrites, talk to attorneys, go to the capital in Missouri and other states, but at the Election Board I got to see everything from start to finish. I kind of became an elections junkie—a nerd. We had an area called the "fishbowl" where the seasonal staff worked and there would often be opportunities to volunteer to do things other than what we were assigned to do. When these opportunities arose, I was always first to volunteer. This was a very busy time because of the 2012 presidential election. I worked at KCEB for three election cycles before receiving an offer in April of 2013 to work in the Finance Department. Working there allowed me to see how the election is paid for from the state allocation to the city and county's financial responsibility. I learned the intricate financial process that makes elections possible. I was intrigued and began to interview for other permanent positions.

At that time, we did group interviews. During one of them, I was asked, "Where do you see yourself in five years?" I replied, "I'd like to be the Democratic Director." My response was not well received. After the interview, I spoke to the supervisor who told me that nobody liked my answer and that I was cocky. However, five years and three months later I became the Democratic Director.

Being interested in individuals and who they are enhances my ability to best serve voters. Understating whom you are serving, particularly as it relates to thinking about ways to help citizens understand how to vote and the power of the vote, is especially important. During the 2018 midterm election I made a list of issues that are affected by voting to counteract the, "Why should I vote?" question which is regularly posed to me when I tell people what I do or am engaged in outreach. I also like to remind people that voting is an opportunity for you to express your pleasure or displeasure with a candidate, an issue, the condition of something (i.e. public schools, streets, programs, etc.). It is the way to ensure that your opinion is counted.

Another example of how I try to meet the needs of my voters and potential voters where they are is through our decision-making process. We recently purchased new voting machines. They were rolled out in April 2018. We also purchased new poll pads (iPads tailored for voter check-in) and used them for the first time in October 2017 for a transportation development district election. Before we purchased the new equipment, we had equipment demonstrations because when we were deliberating the purchase, I didn't think it was my place to make the final decision for the voters. So, because we are spending taxpayer dollars and are here to serve the taxpayer, we provided residents with the opportunity to test out the potential equipment through demonstrations that were set up across the city. The demonstrations allowed the constituents to touch the equipment they were potentially going to use and contribute to the process that determined the equipment that was purchased. This approach has been very effective. Through the demonstrations, we also provided them with the ability to see the results of their participation.

In addition to the voting machines and poll pads, we have a new ballot marking device that eliminates the voter's need to fill in the oval to make their selection. At the end of the process, voters are presented a summary where they are alerted to races and issues they may have skipped and their overall selections. After viewing the summary, they have the option to go back and make changes or proceed with printing the ballot and feeding it into the scanner. The image that voters see after they have submitted the ballot was selected by the voters during our equipment demonstrations; it's a graphic of the Union Station Clock.[1]

[1] Although we have purchased the new equipment, we continue to have demonstration machines available for voters to use and ensure they are acclimated to the equipment and will not be dissuaded from voting because of it.

To be an effective election administrator, you have to know your voters and implement new innovations to serve them. You have to leave your bias and policy preferences at the door. You have to go to the voters. You have to present information in a way that it can be received and understood. You have to know yourself well enough to be comfortable entering spaces where because of who you are, the voters may or may not want you there. You have to demonstrate to the voters that you value them and their input. You have to be comfortable in the uncomfortable because you are there to serve the voters, not yourself.

CHAPTER 9

Changing Demographics in Election Administration

Shauna Dozier

Abstract Over the last 15–20 years, the election administration profession has emerged from its status as an understudied area of public administration. At the same time, there has also been a demographic, cultural, and generational shift among election administration professionals. While some have embraced the shift, others have been resistant resulting in the exposure of beliefs and behaviors that are ageist, sexist, and racist. This case presents the experience of a 17-year career professional in the field who is both a woman and African American. Discussed here are both the mentorship and professional development training opportunities which have helped her navigate the field and the barriers and challenges that she continues to face as an election administration professional.

Keywords Mentorship • Professionalism • Diversity • Outreach

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My experiences come from an array of local jurisdictions, people, and situations. I have served as an election administrator in one of the smallest jurisdictions and the largest jurisdiction in Georgia. Throughout the evolution of my career as an election administrator, I received an education that is not necessarily taught in a classroom. The experiences highlighted in this case study are a compilation of a series of situations that I have experienced as an election administrator for over 15 years.

Currently, I serve as the Election Director at the Clayton County, Georgia Board of Elections and Registration located in Jonesboro, Georgia. Clayton County is a metro Atlanta County located 20 miles south of Atlanta, Georgia. Clayton County houses one of the world's busiest airports, the Hartsfield-Jackson Airport. Clayton County is also home of the Gone with the Wind movie (celebrating its 80th anniversary in 2019). Clayton County has over 191,000 registered voters with 58 polling locations and a population of 285,153. The difference between the number of registered voters and the Voting Age Population is currently less than 12 percent.

Election administration was not my intentional career path, but unknowingly it became my professional future when I was a college student. As I entered this profession, I quickly found myself in the minority. I started as an election professional in my early 20s. I began my tenure serving as a precinct judge for the Durham County, North Carolina Board of Elections as a college student. I served while pursuing a degree in political science at North Carolina Central University (NCCU). As I attended poll worker training and assisted in serving voters, I began to wonder how one get involves in setting up elections. What are the criteria? Is there an educational track that can be used to get into a career in elections? I did not know where to start. Additionally, because historically and in my experience, election administrators and registrars were white, and were from 50 to 80 years old, I wasn't sure if there was room for me in this profession.

After I graduated from college, I relocated to Atlanta, Georgia. After a series of internship opportunities, I accepted an internship in the Georgia Secretary of State Elections Division. I served as an election intern for eight months which lead to my first full-time position as the Regional Voter Education Coordinator. As the coordinator, I served 53 counties in Northwest Georgia, under the State Elections Division in the Georgia Secretary of State Office. I conducted voter registration drives, coordinated

voter education programs, conducted high school as well as university elections, and served as an Elections Monitor. I served as a Regional Voter Education Coordinator for a year. While in this role, one of my most memorable race-related experiences as an election administrator occurred about 20 miles outside of Atlanta, Georgia.

While in Haralson County, Georgia, I engaged in a conversation with a local resident who served as the president of the Historical Society. He was recruiting members to be a part of the Historical Society at the local library. I had a scheduled meeting with the Probate Judge but I arrived earlier than expected and decided to visit the library to provide voter registration applications and materials for patrons. Although I was discussing the Voter Education Program, the local was only interested in me becoming a member of the Historical Society to offer my family's history. I informed the local that I was not from the area but told him I would be open to meeting with the organization to promote voter registration.

The local then became combative and stressed the need for me to join the Society and provided his case for my ancestry. He believed I was the great-granddaughter of his grandmother's housekeeper. He assured himself that he was correct by stating I looked just like his grandmother's housekeeper. I further reminded the local that I do not have any ancestors in Haralson County, Georgia, provided him my card, and told him that if he was interested in voter registration to give me a call. The local then proceeded to give me directions on avoiding the highways to dodge the traffic going back to Atlanta. I respectfully accepted his directions and used my own.

Through my travel around the state, I met most of the election administrators in Georgia. But one meeting in particular changed my professional life. I randomly stopped in the Rockdale County, Georgia Board of Elections and Voter Registration Office to introduce myself and offered the state's voter education services. Rockdale County is located 25 miles east of Atlanta. It is the second smallest county in Georgia by area and at the time served about 55,000 registered voters. Shortly after the meeting, a job notice was advertised for the Assistant Supervisor of Elections in Rockdale. After a year of service in the State Elections Division, I accepted my first local election management position in the Rockdale County Board of Elections and Voter Registration Office in Conyers, Georgia.

After only being an employee of the county for a few short months, my first elections were during the 2008 presidential election cycle. Leading

into the elections, I was provided training that taught me how to manage the day-to-day operations of elections and voter registration. The Supervisor of Elections, Cynthia Willingham, was responsible for my election administration development at the county level. She ensured that I was capable of management and made sure that I was properly trained using a hands on approach. This was different from the primary training method in election administration which some may refer to as baptism by fire. Her approach required long hours of oversight, shadowing, and reading the Georgia Elections Code page by page on a daily basis. I served as the Assistant Supervisor of Elections for 3.5 years.

After several years in the office, Cynthia felt that I was prepared for more responsibility and helped me transition into a position that would not only provide me with more responsibility but also more exposure. I accepted a position as the Administrative Coordinator of Elections (ACE) at the Fulton County Board of Registration and Elections in Atlanta, Georgia.[1] Fulton County is the largest jurisdiction in Georgia with over 774,000 registered voters. The Deputy Elections Chief is responsible for election coordination in the county, serving as the direct report to the Elections Chief. This includes managing advance voting,[2] poll worker recruitment, the maintenance as well as preparation of voting equipment, and changes in polling locations. During my tenure, I was exposed to a vast number of elections as well as voter registration situations. Some of my most notable experiences provided me with the opportunity to work with international elections. I served as a Facilitator for the Senegal presidential election held in Atlanta and I was appointed to serve as a Short Term Elections Observer for the 2015 early presidential election where I served in the Merki District of Kazakhstan. Based on the election and registration experience I received from previous employment, I also had the opportunity to serve in a dual management capacity in Fulton on a temporary basis.

I was appointed as the Interim Registration Chief and maintained my role as the ACE until I was hired as Registration Chief. I served in the Fulton County Board of Registration and Elections Office for five years, until I was hired in my current role as the Elections Director for the Clayton County Board of Registration and Elections during the 2016 presidential election cycle.

[1] This position is now referred to as the Deputy Elections Chief.

[2] Referred to as early voting in other jurisdictions.

Throughout my career, in addition to challenges related to my race, I have also faced barriers as a professional in election administration related to my age. The challenge of managing a multigenerational workforce adds additional obstacles. Throughout my career, I typically have subordinates who range in age between 16 and 75 plus years old. When introducing myself, I receive the same question and response when I initially meet with my subordinates, "How old are you?" Although I do not provide a definitive answer, by veterans and baby boomers I'm often told, "You look young enough to be my daughter/granddaughter." This remark is occasionally followed by a pat on the head.

In most of the offices where I have worked, staffers who have worked in the office prior to my leadership appear to be reluctant to change. For example, increasingly when questioned about a process, the response from the more senior staff has been, "It has always been done this way." To the contrary, millennials may offer an easier way to complete a task using advanced software. That said, there is an advantage to managing a multigenerational workforce. Veterans, Baby Boomers, Generation X, Millennials, and Generation Z employees all offer experiences and skill sets that enhance the productivity of election administration when they embrace their roles in the office and jurisdiction. To bridge the gap, what has worked for me as a best practice has been to team the generations to work on projects together. This allows each group to learn from one another based on their experiences. This practice has yielded an increase in professional development and productivity among both groups involved.

In addition to challenges in the workplace, there have been times where my age has interfered with opportunities for professional growth. For example, in my late 20s, I applied for two election administration deputy positions in California. For one of the positions, I was one of six applicants that were flown to California for a two-part interview. I was in competition with other election directors including a former Secretary of State. I did not make it past the first round of interviews. I contacted the county's Human Resources Department to seek advice on how to improve my interview skills and to inquire about why I was not selected for the second round of interviews. The Human Resources Coordinator subtly told me that the panel was interested in someone who was more "settled" in their personal life. I begin to inquire about what that meant. She further

explained to me that a young woman, single, and without kids presents a high risk of turnover. The county was not willing to take the risk.

The second position was an interview for the Assistant Registrar of Voters in a southern California County. I addition to participating in a WebEx interview, I also submitted responses to interview scenarios that would allow the panel to understand how I would manage election related situations. The panel and the then Registrar of Voters were impressed by my resume, experience, and how I responded to the interview questions. After several reference checks, I was offered the position verbally. Two days after the verbal offer, Human Resources informed me that the Registrar of Voters eliminated the position because she was appointed and was afraid that I would run against her for her position as a younger candidate. I was not aware that running for the position was an option at that time.

At one point, I applied for a Director of Elections position within a county office in which I worked at the time. After submitting my application and moving to the list of qualified candidates, I was directly approached by the then Registration Chief (who served as the Interim Director) and questioned about being qualified for the position. She appeared to be shocked and chuckled as she told me what I already knew, that I was qualified for the position. While looking for opportunities to advance professionally, I also began to pursue election administration specific certifications. I was not supported in this endeavor by the Registration Chief (Interim Director). I relied on my personal finances and family support to complete the majority of the Certified Elections Registration Administrator (CERA) certification classes and travel expenses. During this time, I was fortunate to have the professional support of the Elections Chief Dwight Brower, and when Rick Barron became the new Director of Elections in Fulton County, I was provided with financial support to finish my CERA courses. Like Cynthia, Dwight and Rick encouraged me to continue pursuing my education, learn as much as I could, and continue to apply for positions of more responsibility. Following their advice, I applied for a position as an Elections Director in a metro Atlanta county. After my interview, not being the selected for the position was yet again explained as there being concerns about my age, or being "settled." The focus was not on my experience or my ability to serve in the role of an Election Director. As we think about ways to grow the field and support the careers of women and young professionals, my recommendation to interview panelists and human resources professionals is to place emphasis on the professional experience of an applicant not their ability to grow a family.

Election administration affords public servants an opportunity to serve the community. However, there are times when election officials have to face the sociopolitical aspects of customer service. For example, during an election a 75-year-old white male voter arrived in the office to submit an absentee ballot for another voter who did not meet the criteria of submission. The voter was informed of this and provided the statute from the Georgia Election Code. In response, the voter asked if the situation would be escalated to the director.

The staff called me to further assist the voter. I approached the voter and asked him how I could help him. He responded to me, "You can help me by getting the director." I informed the voter that I was the director and would be happy to assist him in this situation. He was given a copy of the Georgia Election Code and provided instructions on how to handle the ballot properly. The voter became infuriated and responded, "I will be glad when Barack Obama is out of office, that way we can get people like you out of this office and you will no longer have a job." The voter demanded to speak to the "white man in charge" (Prior to 2003, the role of Registrar was filled by a former Probate Judge). After again informing the voter that I was the director, he stormed out and screamed obscenities about me. Nothing could have prepared me for this experience because I realized this was another situation that was not about my ability. My lesson to constituents would be to be more open-minded about being assisted by someone who does not look like you.

Among my friends and family, I am the only person that serves in election administration. When I inform people of my job responsibilities, I receive the same question, "What do you do after Election Day?" Others feel compelled to further the conversation discussing politics and I feel compelled to provide a lesson on elections. Although I have and will continue to face challenges as an election professional, the connections I have made through my international observation missions, my experience working under individuals with an extensive knowledge of elections (averaging at least 25 years of elections experience), and formal training and networking through the completion of election administration courses through the Election Center and Auburn University have positioned me to be a better election professional. Additionally, because of this I am also able to ensure that those who I supervise are able to learn from the challenges I have experienced and have access to a network of working professionals that they can utilize as they navigate the profession.

Moving forward it is important for those who are interested in the profession of election administration to continue professional development, embrace technology, prepare for high levels of scrutiny as we reach a new level of scholarship in the discipline of election administration, and be prepared to be more engaging with a multigenerational and multicultural voting age community. It is equally as important to mentor, cross-train staff, and strengthen voter education outreach through a multigenerational paradigm.

CHAPTER 10

What Is the Role of the Vendor in Modern Elections?

Mindy Perkins

Abstract The election official is the voice of integrity in election administration. They represent the process when elections go wrong and when they go right. Many people and groups help support the process including political parties, nonprofit groups, and vendors. This case focuses on the vendor's perspective of the elections process and how integral it is to incorporate vendor voices into election administration. Communication between vendors and state and local election offices leads to successful partnerships and to successful elections. It is essential that the vendor community be viewed as a subset of the larger elections community. Communication is key for election officials to be able to trust the outcome, and trust in the outcome inspires confidence in voters and stakeholders across the process.

Keywords Vendors • Vendors instrumental in elections community • Customer focus • Nonpartisan • Integrity

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Context

I have been in elections as a vendor since April of 2001 which means that in my 18 years of elections, I have seen many highs and lows. I experienced the aftermath of the 2000 election firsthand while living in Tallahassee, Florida. Our capital city downtown was inundated with speed bumps made up of cables from the news trucks on roads in front of the Florida Supreme Court building. Our small city was overwhelmed with media from all over the world. This was before I worked in elections and little did I know that nearly three months later, I would begin a career of supporting integrity in the elections process.

The election official is the voice of integrity in elections administration. Voters trust elections because they trust their local election official. The local election official is the voice when something goes wrong but many people and groups help support the process from political parties and nonprofit groups to vendors. I will share a vendor's perspective on the elections process and how integral it is to incorporate our voice into election administration.

Setting the Stage

Vendors are crucial for the election community. And yet it is challenging to be a leader in elections because of the spotlight, which has only increased since 2000. We have insights and information that must be heard. However, much of the election community is cautious and isn't interested in leading edge technology—it's too risky and usually costly. Election vendors are concerned that they are only seen as greedy and money-hungry rather than doing what is in the best interest of the community. The election community is close-knit with a small number of vendors competing for business. There are very few secrets in the elections vendor community and news spreads when a vendor doesn't support their customers.

Very few election administrators or vendors went to school for election administration—higher education in the field is too new. Our career paths have led us here and once elections get into your blood, it is hard to say goodbye. Since my start with elections, election administration has become much more professionalized both on the administrator side and for the vendor community. Administrators are held to a high standard to protect the vote, and there is significant scrutiny of whom they partner with. This is important and should be encouraged. Jurisdictions are less likely to partner with an unproven vendor. There is too much at risk, and every single vote must be protected.

Details

VR Systems (VR) was founded in 1992, more than 25 years ago, to serve Florida counties needing an affordable, modern, voter registration system. Florida counties weren't being served by the other voter registration vendors and the systems they had were out-of-date and/or otherwise didn't meet their needs. The founders of VR Systems, Jane and David Watson, built a system that met the needs of those underserved counties. As the need for more modern systems grew, so did the company.

VR has been shaped and influenced by several historical events. Following the 2000 election, Congress passed the Help America Vote Act (HAVA) to fund the modernization of elections. Florida was at the forefront of that initiative and a leader among states in the transition. At the time, VR offered its flagship product, Voter Focus, which is a comprehensive elections management software system for voter registration. VR expanded rapidly to meet the state's technology needs and was highly successful. Together, in just 18 months, founder Jane Watson and I successfully onboarded over 35 new Voter Focus counties in Florida out of its 67 counties.

VR's electronic pollbook EViD was later developed in response to powerful Category 4 Hurricane Charley which wiped out precincts in Southwest Florida just weeks before a primary election. The 145-mph winds and rain caused $6.755 billion in damages in Florida alone.

The devastation across the region was massive and thousands of people were displaced. The challenges facing the affected counties were both significant and numerous. The following illustrates some of the conditions that VR encountered in Charlotte County and Hardee County, and how we responded.

In Charlotte County, despite the fact that the homes of many election office staff were harmed or destroyed by the hurricane, people reported to work because they knew the election couldn't be delayed. Governor Jeb Bush declared an election emergency that gave counties affected by the hurricane the administrative operating flexibility they needed to meet the needs of residents. That included combining precincts if a building was destroyed and the ability to move polling places. Because so many voting locations were ravaged by the storm, Charlotte County had to cut its precinct polling places from 80 to 22; within these 22 were 9 consolidated "super precincts." The existing paper pollbooks that listed the voters at specific polling places would not meet the needs in this chaotic environment. The election office needed a tool that would allow voters in Charlotte

County to vote at any polling place in the county—not just the precinct to which they had been assigned. Some of the consolidated precincts had as many as 10,000 voters assigned to them which could have created a nightmare for poll workers on Election Day. Charlotte County officials expressed fears that they would never be able to handle the crowds at the super precincts with conventional methods.

VR Systems was asked if there was anything we could do to help. We have always thought of ourselves as an extension of an election office and this time was no different. If there was anything we could do to help, we were going to do it. We quickly analyzed what the pollbook system requirements were and identified the problems that needed to be solved. Most important, the system needed to check-in voters as efficiently and accurately as possible. We worked closely with the county and in less than a week, we delivered a device that would allow voters to be checked in on a laptop rather than the paper pollbooks that were in use at the time.

Two of VR's lead developers traveled to Charlotte County to set up and train staff and poll workers on the voter check-in system that would be used during the primary election. The election staff and poll workers were trained on the new system in a short period of time. We worked tirelessly, along with the entire election office, to help conduct a successful election.

The new system worked well and allowed voters to retain their right to vote in the new precinct structure, despite the tragic circumstances that surrounded them. And out of this tragedy came innovation. The system that VR crafted would become the EViD electronic voter check-in system that many counties use today. Following that successful election, the electronic pollbook EViD was patented and today more than 15,000 EViDs are used in major elections across the country.

One of the other counties tragically affected by Hurricane Charley was Hardee County which is home to Arcadia, Florida. Hardee County lost half of its voting locations and 75% of its county residences. The county was left with more than $750 million in damage. In addition to the physical losses the county suffered, it also suffered the loss of its top election official, Dean Cullins, to a heart attack two days after the hurricane. Hardee County is a small county with only a few staff members so their needs were smaller in scale but no less important. They needed help prepping for the election since their tiny office staff size was reduced by one-third. Two of our employees drove down to Hardee County to help in any way they could. For quite some time the county was without a Supervisor of

Elections (the elected county official responsible for election operations) and basic functions could not be performed. VR staff were quickly deputized so that they could help run the election. They returned absentee ballots and registered voters, all with no air-conditioning or comforts. Because we had so many staff helping in the counties, it left only a few people to help all of our other customers in Tallahassee. Despite these and other challenges, we all pitched in to ensure that the counties ran elections smoothly.

More recently, as CEO I was called to guide VR through a high-profile news event that directly impacted the company's reputation. In 2017, a defense contractor employee leaked a confidential document that depicted VR as the subject of a Russian phishing attack. VR was not compromised as a result of this attack. However, the following weeks, months, and years brought tremendous international scrutiny to the company. We worked tirelessly directing a crisis response team to communicate information concerning the nature of the attempt as accurately and transparently as possible.

VR has stepped into the role of an elections cybersecurity leader, serving on a US Department of Homeland Security (DHS) executive committee and implementing a cybersecurity communications education program to share VR's experience with election officials around the country. In addition, the company has launched its own internal cybersecurity program, recently becoming the first vendor to successfully complete both DHS risk and vulnerability assessment (RVA) and Hunt testing which provides assistance to potentially impacted entities, analyzes the potential impact across critical infrastructure, investigates those responsible in conjunction with law enforcement partners, and coordinates the national response to significant cyber incidents (Department of Homeland Security ND).[1]

Implications of Changing Technology

The promises and limits of technology are very apparent in the election community and where the needs and desires of election administrators come face-to-face with what is possible in equipment used in conducting elections. Election administration is a niche community with custom-built technologies. What is true but not easy to see is that, often, technology in one sector would not work in another.

[1] United States Department of Homeland Security. "Cyber Incident Response," accessed February 27, 2019. https://www.dhs.gov/cisa/cyber-incident-response.

For example, there has been much focus on online voting which would allow the right to vote to be held in every voter's hands. The implication is that since banking can be done online, voting can be done online too. And this is appealing; it would be very user friendly if a voter could simply vote online—this would eliminate the need for polling sites, poll workers, expensive equipment, and so on. But this is a misconception. The primary issue I have with this approach is that every vote is private and must be tallied. Banks lose money each year because of online attacks. In 2017, financial services firms, banks lost $16.8 billion to cybercriminals (Mirchandani 2018).[2] Are we willing to take that gamble with our right to vote? I can't imagine that any voter would be ok with their vote being the one that is lost. Vendors are responsible for delivering solutions that protect every voter's right to vote. Technology does not yet exist that can ensure that all votes would be tallied in the way the voter intended.

There is also tension between all the different expectations we have about voting, and about what we want from voting equipment. There must be a balance between a voter-friendly experience, equipment security, and costs that are reasonable for taxpayers and politicians. If one of those items is out of balance, the system delivers less than expected in some way. It is a constant challenge in the vendor community today to maintain usability and keep support costs low without compromising on security.

It is also important to note that integrity is more than software or hardware security. Part of voter confidence in the outcomes of elections has to do with their belief in the fairness of the process. So, the idea of integrity has to include nonpartisan attitudes and practices. Voters may care about political parties and which of their candidates won or lost, but vendors cannot show preference or favoritism of any kind in the work that we do.

Reflections

No matter the technology requirements and changes, personal relationships are key. Strong relationships between vendors and election offices are the cornerstone to successful elections. Communications between vendors and offices lead to successful partnerships and to successful elections. Communication is key for election officials to be able to trust the out-

[2] Mirchandani, Bhakti. "Laughing all the way to the bank: Cybercriminals targeting U.S. financial institutions," Forbes, August 28, 2018, https://www.forbes.com/sites/bhaktimirchandani/2018/08/28/laughing-all-the-way-to-the-bank-cybercriminals-targeting-us-financial-institutions/#24e90c856e90.

come, and trust in the outcome inspires confidence in voters and stakeholders across the process.

It is also essential that the vendor community be viewed as a subset of the larger elections community. We are often viewed as outsiders who only know very basic information and that we only need to know what we are told. Vendors have broad perspectives that are often disregarded because of our role in "selling widgets." I believe that without vendors' input and participation, only part of the story is told. It is critical to hear the wide variety of voices and for us to do what we can to better the election community, and this is only possible with communication and trust. For example, election officials often ask us our opinion about the best way to perform a task since we glean inputs from a wide variety of customers. As another example, the term "voting systems" is widely considered to mean vote tabulation systems, but not other types of equipment used in elections. The voting environment uses many kinds of equipment that are not tabulators, and vendors of these other types of equipment have a unique perspective that encompasses the broad spectrum of election administration.

As a voter registration and electronic pollbook vendor, VR Systems has a unique perspective that encompasses this broad spectrum and I am confident that VR will continue to pursue its work in finding solutions for election administrators. We trust that our customer focus demonstrates commitment under extremely challenging circumstances, and that our commitment to integrity demonstrates our service to our customers and to election administrators everywhere.

CHAPTER 11

The Cost of Convenience

Lori Edwards

Abstract When state legislatures mandate voting by mail and early voting in addition to Election Day voting, the cost of conducting an election disproportionately increases. Factors contributing to the cost of convenience include staffing, electronics, logistics, and materials. Since any voter may choose to vote by any mode at any time, duplicate preparation is needed to accommodate peak demand at all early voting sites, precincts, and Vote-by-Mail departments. Lawmakers often don't have the financial data they need to consider when making election administration policy, and although there is immense cost involved, data suggests that more opportunities to vote do not increase voter participation.

Keywords Mail voting • Early voting • Election convenience • Election costs • Election policy

I am the Supervisor of Elections in Polk County, Florida, and have served since 2001. Polk County is located in central Florida along the Interstate 4 corridor between Tampa and Orlando and has a diverse population of about 680,000 people. In addition to conducting elections, our office is

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responsible for all voter registration activities, as well as candidate services. As an election official, of course my job is to conduct fair and accurate elections. Taxpayers expect this to be done efficiently. As new laws have been implemented, I think fairness and accuracy have increased. But policies designed to offer voter convenience have ballooned the cost of elections in obvious and many hidden ways. I'm not referring to the natural inflation that would occur as the price of goods and labor increase with time. This is the result of the cost of expanding the opportunity to vote.

Legal Landscape

To put the spotlight on Florida, all precincts are open from 7:00 a.m. to 7:00 p.m. on Election Day. Local supervisors of elections determine the number of precincts and their geographical configuration in consultation with their local board of county commissioners. Factors contributing to the size and boundaries of precincts include a unique combination of districts, communities of interest, traffic patterns, and suitable polling places. In some areas, the local governing body relies entirely on the Supervisor of Elections recommendations. In other areas, county commissioners prefer to be more involved in the mapping of precincts.

For a long time, poll lists, which contain the names of all eligible voters, were in a paper format at most Florida precincts. This changed following the passage of a law in 2013 that incentivized Supervisors of Elections to use electronic pollbooks (EPBs), which contain the voter registration file in electronic format. Now, if EPBs are deployed, voters moving from county to county may vote a regular ballot instead of a provisional ballot. This is much quicker for the voter and easier for poll workers and saves election officials hundreds of hours of research and processing provisional ballots immediately following the election.

Florida law allows "no excuse" voting by mail. Voters may request a ballot for a specific election any time up until 10 days before Election Day, or have a standing request for all elections through two general election cycles with no requirement to provide a reason such as illness or being out of town on the day of the election. Early voting, which occurs up to two weeks before Election Day, is also mandatory for all jurisdictions. The law requires at least the same number of early voting centers as the jurisdiction had in 2012. Early voting sites must be open 8–12 hours a day for at least 8 days but no more than 14 days. The law prescribes exactly which buildings may be used to provide early voting, including

public libraries, fairgrounds, courthouses, stadiums, and convention centers. Public schools, private community clubhouses, or houses of worship are not allowed.

Diminishing Returns

Although there are more options for voting in Florida, we have not seen an increase in voter participation. A comparison of Florida turnout for presidential elections shows no growth or spike to accompany the provision of additional modes for voting (Fig. 11.1). When expenses increase while participation remains static, the law of diminishing returns is at play. The return on investment is decreasing as we strive to be more and more accommodating to voters.

To examine this a little closer, here are some examples from Polk County, a jurisdiction with 407,647 registered voters in the 2016 presidential election. Polk has held steady at 167 precincts for a dozen years, despite a 20% growth in population. There are nine early voting sites in Polk.

In the 1950s, fewer than 3% of Polk County's voters cast ballots by mail. These were probably our military and overseas voters. The rest voted

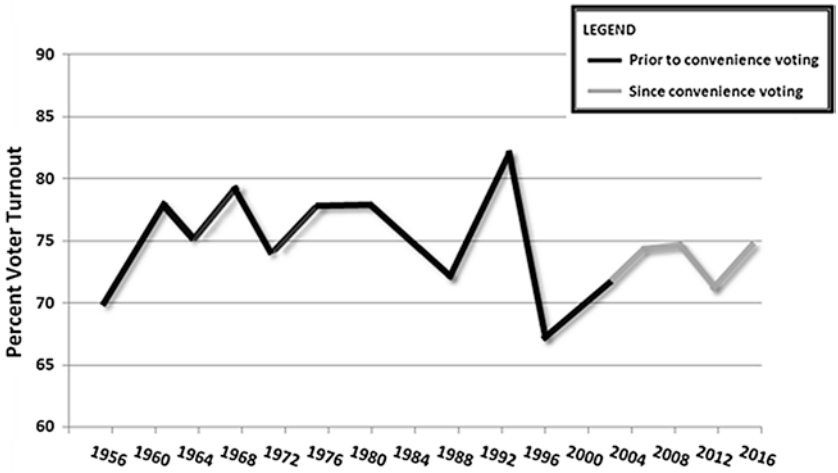

Fig. 11.1 Turnout in Florida

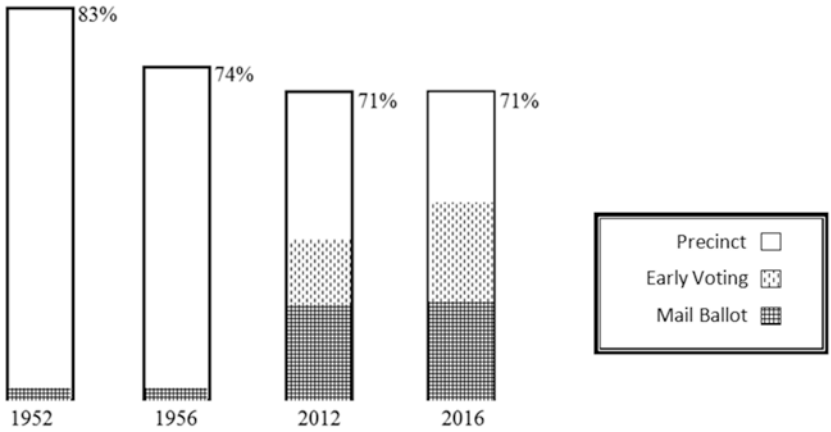

Fig. 11.2 Changes in voting methods—Polk County

in person at their precinct on Election Day, as there were no provisions for early voting. Turnout in the 1952 presidential election was 83%. In 1956, it was 74%.

In 2012 and 2016, early voting and Vote-by-Mail were in full swing. Turnout in both elections was 71%. In 2012, 51% voted at the precinct on Election Day, 27% cast mail ballots, and 22% participated at an early voting center. In 2016, 40% voted on Election Day, 28% cast mail ballots, and 32% voted at an early voting site (Fig. 11.2).

As voters have changed their voting methods, we need more resources to accommodate these changes, and have to allocate resources differently.

Contributing Factors

More Polling Locations

When Florida became a state in 1845, voters residing within a defined area were to vote at a specific location, usually the county courthouse. Public officials or employees took time from their regular duties to facilitate the election and total the results. Cost to the government was negligible.

As the population grew and more people became eligible to vote, more precincts were created in Florida. Now there are more than 6000 precincts

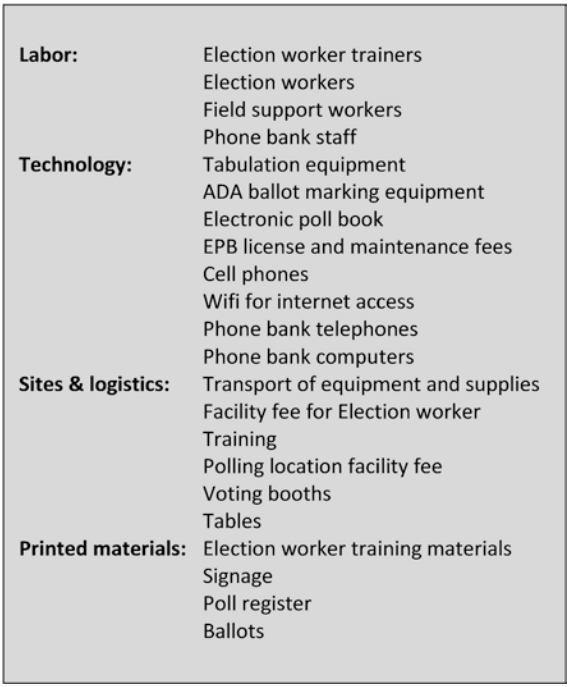

Fig. 11.3 Polling locations as a cost center

in the state, and voters expect to have a polling location that is convenient to their home and place of work. Polling locations are expensive and involve many costs that are not immediately apparent (Fig. 11.3). Voters expect polling locations to be in their neighborhood. Following the 2010 census and redistricting, a necessary shift in polling locations for some voters resulted in more than a few calls of complaint from voters who now had to travel an extra mile to vote at their precinct.

Vote-by-Mail

Vote-by-Mail, when combined with precinct voting, still can be efficient in high turnout elections. Of course, there are costs associated with printing two envelopes, privacy sleeve, and instructions for each ballot packet, along with the postage which is paid by the county. Staff must be paid to

issue each ballot and process each ballot for mailing. Then, staff must be paid to receive each ballot, verify the signature on the ballot, mark the voter as having voted, present the ballot in the envelope to the Canvass Board, open the ballot envelope, reconcile the number of ballots, process the ballot through the tabulation unit, and replicate any ballot that may be unreadable by the tabulation unit.

When a voter requests a ballot in advance and then votes and returns that ballot, there is no duplication of effort. Since we know in advance that the voter intends to vote by mail, we will not plan on his/her attendance at the polling location. We will not purchase a ballot for that voter for their polling location, and when we staff their polling location, we subtract the mail ballot voters from the likely number of expected voters.

The convenience of voting by mail causes hidden costs when the voter does not vote their ballot. If they simply don't vote, we have incurred the costs of printing the ballot and ballot materials, issuing the ballot and postage even though the voter did not have interest in or intent to vote. Another way that the Vote-by-Mail option can cause additional costs is if the voter requests a ballot, the election office prints, prepares, and mails the ballot and then the voter decides to vote at an early voting location or precinct instead. In this scenario, which occurs thousands of times in Polk County during each general election, the voter requires 2 ballots, mail ballot materials, precinct resources, and staff at the precinct and election headquarters to cancel the mail ballot before the precinct ballot is provided.

Because of the convenient opportunity to vote by mail or vote at the precinct, a method to prevent a voter from casting a ballot both ways (voter fraud) is necessary. The most simple and inexpensive way to accomplish this is with an election worker on a telephone at the polling location speaking with a worker at Election Headquarters. For busy elections, or in mid- to large-sized jurisdictions, an automated process is needed, usually in the form of electronic poll registers connected to the internet via some form of temporary internet access. When poll registers or temporary internet access devices are deployed at each polling location, specialized support staff is usually needed to guide workers through common problems or go to the site to address more puzzling malfunctions.

Early Voting

For early voting, each election office must open short-term temporary voting sites staffed and equipped to provide voting to any eligible voter in the jurisdiction for 8–12 hours a day for a week or two before an election.

Early voting sites incur all of the costs associated with a precinct, plus overtime, and often printers and toner.

One of the biggest challenges, and inefficiencies, of early voting is the unpredictability. Any voter can show up at any time, at any location. So, each location must have every possible ballot style available. All Florida counties use either the "pick and pull" method or ballot-on-demand to issue the correct ballot style to each voter. With the "pick and pull" method, each early voting site is stocked with an inventory of all ballot styles and the election worker selects a ballot from that stock for each voter. When ballot-on-demand is utilized, printers are deployed at each voting site and a ballot is printed for a voter once they check in and verify eligibility.

In Polk County, in a statewide primary election, there are at least 501 distinct ballot styles. The "pick and pull" method, which consists of each early voting site keeping an inventory on hand of each ballot style, would mean that each of the nine sites would need a supply of each style of printed ballot as well as suitable storage. Just 100 ballots of each style at each location would mean a ballot order of 450,900 ballots just for early voting, which is more than the total number of voters registered in the county.

The alternative—ballot-on-demand—means the purchase, maintenance, and storage of at least 40 laser printers and multiple toner cartridges for each, as well as the blank ballot stock.

More Resources Than Voters

It's the unpredictability that drives the cost. Election officials must prepare for more than 100% turnout. Below the story is told with ballots, because they are easy to count, but the cost of technology, logistics, supplies, and staffing grow at a similar pace.

In Polk County in 2016 there were 97,148 mail ballots sent per voters' requests. Of course, we needed to keep on hand at least 50 of each of the 167 ballot styles in a general election for last-minute ballot replacements or walk-ins. That's another 8350 ballots.

About six weeks before Election Day, ballots must be ordered from the printer for polling locations. At that point, new voters are still registering, so there's a moving target for the number of registered voters. Most officials would agree to expect turnout of 70%–85% for a presidential election. In Polk, we have precincts that turned out more than 90% of their voters.

Precinct ballots ordered:	265,000
Vote-by-Mail ballots sent:	97,148
Vote-by-Mail ballot reserves:	8,350
Early Voting ballots printed on demand:	92,600
Early Voting ballot reserves:	16,700
Total Ballots:	**479,798**
Total Registered Voters:	**407,647**

Fig. 11.4 Comparison of ballots to voters in 2016

It would be safe to order ballots for 65% of our voters to vote at the polls for a total of 265,000 ballots.

Early voting ballots are often print-on-demand, which eliminates the cost of commercial printing, but the expense of laser printers, toner, and paper stock are incurred. In 2016, 92,600 ballots were printed and voted at early voting sites. Also, any prudent election official would have a small quantity of emergency ballot supply for continuity of operations in case of a site evacuation or power failure. One hundred ballots of each style equates to 16,700 ballots (Fig. 11.4).

Inconvenience as a Reason Not to Vote

According to a Pew Research Center analysis of new Census Bureau data, registered voters who did not vote cited nine reasons more frequently than inconvenience. One quarter of the respondents said they didn't like the candidates or issues, 15% said they weren't interested, or thought their vote wouldn't make a difference, 14% were too busy. Just 2% of registered voters who did not vote cited inconvenient hours or polling locations. Increased convenience does not result in greater participation, and those who do not vote rarely claim inconvenience is their reason for not participating.

Challenges

Policy decisions to increase convenience are often made by lawmakers who may not be aware of the relative financial impacts of the decisions they are making. And, while efficiency is a laudable goal for all government functions, it's not a primary objective when conducting an election. Even if they want to cut some financial corners, policymakers usually don't have the data they need. The study of the cost of elections is still in its infancy. Election administrators have struggled with the complexities of financial data collection in an environment of over 7000 jurisdictions ranging from hundreds to millions of voters operating under different laws in each state. The information in this case provides an in-depth look at one county in one state. Each of these in-depth looks help shape our understanding of costs, which will in turn shape a more complete picture of the particular cost data that matter, regardless of the differences across states. This understanding is particularly important given the popularity of the implementation of multiple options to enhance voter convenience.

CHAPTER 12

Ghana's 2012 General Election: Free, Fair, and Flawed?

Kelly Ann Krawczyk

Abstract Ghana has held credible, multi-party elections since 1992, with peaceful alternation of power in 2000, 2008, and 2016. Yet despite this strong democratic track record, Ghanaian elections are still regularly marred by allegations of fraud. This case study details the 2012 general election in Ghana, which was contested in the Supreme Court by the main opposition party, the New Patriotic Party (NPP). The case study highlights the use of mechanisms such as election observation and biometric technology in order to increase the credibility of the election and deter fraud. It also outlines the challenges stemming from the use of these tools, including major malfunction of biometric technology, and relocation of fraud to polling places without the presence of observers. An important conclusion we can draw from the Ghanaian experience of 2012 is that

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solutions employed to deter electoral fraud, such as the deployment of election observers and the implementation of biometrics, are valuable but insufficient solutions. In some cases, political parties still retain the incentive and ability to manipulate the operation of elections.

Keywords Ghana • Election • 2012 • Biometrics • Election observers

Introduction

The country of Ghana, West Africa, enjoys elevated status as the "shining star" of African development (Address to the nation, delivered by Ghanaian President John Dramani Mahama, August 15, 2012). Ghana was the first colony to gain independence from British rule in 1957, and has a history of democratic elections since 1992. While Ghana is considered one of Africa's most stable and highly functioning democracies, accusations of election fraud still regularly tarnish the democratic process (Jockers et al. 2010).

As part of a team of certified international observers from Wayne State University in Detroit, Michigan, I conducted short-term election observation during the 2012 Ghanaian general election. Our team observed eight polling stations in various districts in the Greater Accra Region of Ghana, in and around the country's capital, on December 7, 2012. Although this was a small, nonrepresentative sample of polling stations, it did allow me to observe and experience firsthand the events that unfolded on Election Day.

Ghana's Electoral Environment

Ghana is a constitutional democracy, and grants universal suffrage at 18 years old. Electoral violence in Ghana is rare, and voter turnout is high. The president is elected by majority vote in a single, nationwide district and serves one four-year term. The country's unicameral parliament is made up of 275 representatives elected by popular vote from single-member constituencies every four years. Elections are held simultaneously for both parliament and the presidency. In 1992, Ghana adopted a new constitution and established the country's Fourth Republic. Since that time, peaceful alternation of the political party holding executive power has occurred three times, in 2000, 2008, and most recently in 2016.

Ghana has a competitive, two-party political system. The two major parties, the New Patriotic Party (NPP) and the National Democratic Congress (NDC), are supported by roughly equal numbers of voters, and together these two parties claim more than 95% of the vote. The NDC and NPP exhibit modest but genuine policy differences, as well as partially distinct social bases of support (Golden et al. 2015).

National politics are highly competitive in Ghana. In the 2008 presidential election, the NDC won with a margin of only 40,000 votes out of an electorate of 14 million (Golden et al. 2015). Partisan competition is not evenly distributed across Ghana's ten regions, however, each party has stronghold areas. The NPP is concentrated in the Ashanti Region, and the NDC is concentrated in Volta. These two regions are commonly thought of as party strongholds, whereas the other eight regions exhibit greater partisan competition (Fridy 2007; Morrison and Hong 2006).

In July 2012, following the death of President John Evans Atta Mills five months before the end of his term, Vice President John Dramani Mahama took office. Competing for the presidency in Ghana's general election on December 7, 2012, were incumbent president John Dramani Mahama of the National Democratic Congress (NDC), his main challenger Nana Akufo-Addo of the New Patriotic Party (NPP), and six other candidates. According to the International Foundation for Election Systems (IFES), Ghana had 14,158,890 registered voters during the 2012 general election. There were 11,246,982 votes cast, and 251,720 invalid votes, resulting in a 78% voter turnout. The incumbent National Democratic Congress (NDC) candidate, John Dramani Mahama, received 50.7% of the vote, while the main opposition challenger, Nana Akufo-Addo, received 47.7% of the vote. Because the incumbent president John Mahama obtained a majority, with 50.7% of votes, there was no run-off election.

Election Observation in Ghana

Ghanaian elections are observed regularly by both domestic and international missions. International missions included the African Union, National Democratic Institute (NDI), and the Electoral Institute for Sustainable Democracy in Africa (EISA). Ghana's Coalition of Domestic Election Observers (CODEO) is perhaps the most well-known and credible domestic observer group, and has been accredited by the Ghanaian Electoral Commission (EC) since 2000. CODEO recruits and trains

professionals, typically school teachers and college students, to observe the electoral process. CODEO assigns observers to polling stations in their home areas, where observers are likely to be personally known and to enjoy community respect due to the nature of their professions. Each CODEO observer is assigned a single polling station on Election Day. Polling places selected for observation are not identified publicly in advance of the election, meaning that officials and voters at every polling station must realistically anticipate an observer (Golden et al. 2015).

In 2012, CODEO's observers were trained to use short message service (SMS) to report irregularities and disruptions to a national data center. If an incident is serious, CODEO has communication structures in place to alert appropriate legal and security officials. CODEO also releases press statements throughout Election Day and its election headquarters in Accra serves as a hub of public information about the process.

Biometric Election Technology in Ghana During the 2012 General Election

Despite nearly two decades of election observation intended to deter irregularities, allegations of fraud still occur regularly in Ghanaian elections, especially during the pre-election phase. This may be because this phase of the electoral cycle is observed less frequently. For example, implausibly large numbers of names appeared on the voter rolls leading up to the 2012 election (Oduro 2012).

To help combat such issues, Ghana now employs perhaps the most ambitious application of biometric technology on the African continent, using biometrics for both the voter registration process, and also to authenticate voter identity at the polls[1] on Election Day (Golden et al. 2015; Piccolino 2016). During the 2012 election cycle, the Electoral Commission of Ghana introduced biometric voter registration in order to verify and de-duplicate data, and reduce multiple registrations. The entire electorate was reregistered using biometric markers (ten fingerprints) during a six-week period in spring 2012. New voter identification cards were issued featuring head shots. This reregistration process identified approximately 8000 double registrations, of which 6000 were judged intentional (Darkwa 2013).

[1] Biometric verification machines are used to authenticate voters at the polls. However, actual voting takes place using a paper ballot.

After the biometric registration process was complete, biometric verification machines were delivered to all 26,000 polling stations in the country for use on Election Day. The EC also purchased another 7500 backup machines for use in the event of equipment failure. Because the equipment is battery operated, spare batteries accompanied each machine (Golden et al. 2015). While the combined system of biometric registration and verification was presented as a success, in practice there were serious problems, particularly on Election Day. These issues are discussed in the next section.

Election Issues and Challenges

The observation undertaken by the Wayne State University team on December 7, 2012, only begins to scratch the surface of the challenges that presented themselves on Election Day. In the Greater Accra Region, we observed polling stations with long lines and crowding in the morning. In three polling stations where we observed, these long lines, coupled with agitated crowds, caused conflict between voters. In another polling station, police were called to settle a dispute over accusations of line-cutting. In the remainder of polling places we observed, lines were shorter and voters remained orderly. By the late afternoon, none of the polling stations we visited in Accra had lines. Although the polls reopened the following day in one northern region of Ghana due to failure of biometric voter identification equipment, none of the eight polling stations we visited in Accra reported any difficulties with biometric voter identification equipment (Krawczyk 2013). Yet, it is clear that use of biometric technology, particularly on Election Day, was in fact marred by difficulties.

Biometric technology was utilized on Election Day to verify the identity of voters, by scanning voters' fingerprints at the polls using biometric verification machines. In some cases, however, biometric verification devices failed to identify individuals' thumbprints, and some biometric verification machines failed entirely. The Electoral Commission mandated that no one would be allowed to vote without their identity being verified biometrically. However, approximately 19% of polling stations experienced a breakdown of the verification machine at some point during the day (Coalition of Domestic Election Observers (CODEO) 2013). Breakdowns appear to be caused by battery overheating and exhaustion, and when battery replacement was attempted, the machines froze up, sometimes for several hours.

The biometric verification machine breakdowns delayed voting, and by noon on Election Day, Ghana's President, John Dramani Mahama, appealed to the Electoral Commission (EC) to allow individuals with valid voter ID cards to vote at polling stations where biometric verification machines were not functioning. The EC rejected the proposal, instructing their local officials to instead permit voting to continue into a second day where necessary (Golden et al. 2015).

In addition to issues with biometric voter authentication, another issue of credibility arose—over vote-tallying and recording—which ended up distracting attention from the failure of biometric technology. Despite serious technological issues, the candidates, election officials, and donors who supported the introduction of biometric technology failed to question what they considered to be the inherent value of biometric technology. Furthermore, despite its clear limitations, the biometric process received a positive assessment by the general public. According to a survey conducted by CODEO of registered Ghanaian voters, 78% of respondents agreed biometric registration represented an improvement over the old system, and 87% of respondents considered it a useful tool for promoting credible and peaceful elections (Piccolino 2016).

The failure of biometric technology did, however, lead to a complaint filed by Nana Akufo-Addo, the presidential candidate of the major opposition party NPP, his running mate Dr. Mahamadu Bawumia, and the Party's Chairman Jake Obetsebi Lamptey. They petitioned the Supreme Court to look into the 2012 elections in light of irregularities. The major charge by Addo and the NPP was related to the use of biometric voting machines: that the EC permitted voting to take place in many polling stations across the country without biometric verification, and these votes were therefore unlawfully included in the declaration of results by the EC in the presidential election. After series of legal battles spanning from April 16 to August 29, 2013, the Supreme Court gave its final judgment, and the NPP's complaint was dismissed.

Empirical Evidence on the Impact of Election Observers and Biometrics at the 2012 Polls

The assumption is that both the presence of election observers, as well as the use of biometric technology, can help reduce electoral fraud and irregularities. Thus, Ghana employed both observers and biometric technology

during the 2012 election. But did it work? And what is the relationship between election observers and biometric technology? There is empirical evidence from Ghana's 2012 elections that can help explore these questions.

Asunka et al. (2013) provide promising evidence on the ability of observers to deter fraud. Their study, implemented in 2000 polling places[2] during Ghana's 2012 election, finds that observers significantly reduce overvoting and suspicious turnout at polling stations to which they are deployed, by up to 60%. Yet the very same study also offers less promising results: political parties are able to successfully "relocate" fraud from observed to unobserved stations in their historical strongholds, where they enjoy social penetration and political competition is low. They are not able to do so in politically competitive constituencies.

In 2012, biometric identification machines were used in every polling station in Ghana as a way to reduce fraud. Recall, however, that up to 19% of these machines failed on voting day. Golden et al. (2015) randomly selected a sample of polling places in four of Ghana's ten regions, in order to study whether election observers impacted biometric machine malfunction. They also examined the effect of observers on fraud in order to analyze the complex relationship between observers, machine malfunction, and electoral fraud.

Golden et al.'s (2015) main finding is that in polling stations with a randomly assigned domestic election observer, biometric identification machines were about 50% less likely to break down than in polling stations without observers. Second, they found machine breakdown was more prevalent in electorally competitive areas. Third, they also found that three markers of election irregularity—overvoting, registry rigging, and ballot stuffing—were more common in polling stations affected by the breakdown of the biometric identification machines, especially when an election observer was not present. This supports the findings of Asunka et al. (2013) and suggests those seeking to manipulate election results may actually be successfully relocating fraud to polling places without an observer present.

[2]The authors of this study partnered with Ghana's Coalition of Domestic Elections Observers (CODEO), and randomly assigned election observers to just over 1000 of Ghana's 26,000 polling places (treatment locations). They also collected data from an additional randomly selected 1000 polling stations to which observers were not deployed (control locations).

Conclusions and Lessons Learned

Election observation has been an increasingly prevalent tool across the globe, and especially in Africa, in order to curb election irregularities. There has also been a huge increase in the use of biometric technology in elections over the last two decades. In Africa, roughly half of all national elections now use biometric equipment (Cheeseman et al. 2018). While election observation and biometric technology clearly have promise as tools to achieve more credible elections, we must also exercise caution. For example, despite the widespread deployment of election observers, and empirical evidence supporting the contention that observers can help reduce electoral irregularities and fraud, there is evidence that indicates observers may also "displace" fraud to unobserved polling locations. And recent evidence suggests that biometric technology is not infallible: it relies on complex procedures that are liable to break down, and may actually increase suspicion of fraud and encourage complacency toward traditional forms of election oversight (Cheeseman et al. 2018, p. 1398). Due to these limitations, we must carefully consider whether tools such as biometric technology are worth the cost, and whether they can actually achieve intended outcomes.

The case of the 2012 Ghanaian election illustrates these concerns. Biometrics was introduced in an effort to curb electoral irregularities and to produce cleaner elections, yet evidence suggests this may not have happened to the extent which we hoped. The breakdown of biometric machines reduced the ability to authenticate voters, and may have even provided an entrée for those trying to manipulate election outcomes. Electoral management bodies may try to justify the resources required to implement biometrics, but the case of Ghana shows the perils of overpromising what technology can do—it can't change political practice overnight. And when it comes to deploying election observers, the 2012 Ghanaian election provides an argument for greater investment in domestic observer programs, especially if fraud is being relocated to polling places without observers.

An important conclusion we can draw from the Ghanaian experience of 2012, evident in the work of both Asunka et al. (2013) and Golden et al. (2015), is that solutions employed to deter electoral fraud, such as the deployment of election observers and the implementation of biometrics, are valuable but insufficient solutions. In some cases, political parties still retain the incentive and ability to manipulate the operation of elections.

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PART II

Professionalizing the Field and Building Capacity

CHAPTER 13

Creating Professionalism in the Field

Ernest Hawkins

Abstract Election administration has and is changing as the process becomes more transparent and challenging. This case traces efforts made by a core group of individuals to professionalize election administration and create a professional curriculum for election administration. Also discussed is the connection between enhancing professionalism in the field and ensuring the necessary resources are provided to insure the integrity of elections in the United States.

Keywords Training • Education • Reform • Election • Professionalism

Election administration has changed since 2000, mostly for the good. From my vantage point of 35 years in the business of elections, my experience as a local election official for a large suburban county, and my service on national boards and commissions, I have observed some points about election administration that are important for those trying to understand the field (like members of the media and researchers) and for those working in it today.

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As a starting point, people looking at elections need to understand that the field is detailed, complex and full of interlocking pieces. The inner workings of offices are complex, and the system across the country is even more so. And our lack of understanding is expensive, and so we should learn more. In the administration of elections, it is particularly important that the process is very transparent and that all of the stakeholders in the election process feel confident that the process is honest, fair and that every vote counts. For policy makers and for those involved in financial resource allocation, a thorough understanding of the details is required, so as to fund elections at an appropriate level to insure that the goals of an election are met.

When an election fails, for almost any reason, it is expensive. The cost of conducting the election over, taking appropriate actions, and restoring voter confidence sometimes requires major and expensive revisions to laws and process which usually exceed, by significant amounts, the cost of doing it correctly the first time. Thus, it is important to fund elections at an appropriate level.

Often a lack of education is named as the weak link in the voting process. Election administrators nationwide recruit and train well over a million poll workers for Election Day activities. For that reason alone, election administrators themselves need to be well trained.

Election administrator titles, responsibilities and salaries vary widely around the United States. Some administrators are only part-time while others carry more responsibilities than just administering elections. For example, the top election official in Los Angeles County California (a jurisdiction with over four million registered voters) is also the County Clerk and Recorder. In some jurisdictions the individual in charge of elections is elected while others are appointed. For those who are appointed, there are generally some specific education and/or experience requirements. Generally, education and/or experience are not required for those who are elected.

I was an appointed election official. I did have some limited election administrative knowledge. But "limited" is the key word. I was like a sponge trying to soak up knowledge about the responsibilities that I was about to perform. If a group of election folks were meeting anywhere in the country to discuss election processes, I wanted to be involved. I was lucky that I worked for a jurisdiction and for leadership that encouraged me to get training wherever I could. But in 1984 there wasn't much.

Election administrators learned from one another, which, by the way, is still a major source of education.

In 1984, a group of election professionals and academics met informally to talk about some sort of formal professional education for election administrators. From these conversations, the Election Center was born and it is now in its 35th year. We partnered with Auburn University's Master of Public Administration in 1992 to develop formal, professional education for election administrators. Very specific requirements are needed to complete the course of study leading to a certificate in election administration called CERA (Certified Elections Registration Administrator). In 2017 the certification program graduated its 1000th student. To date, more than 30 courses have been developed and are taught through CERA, which is the only national certification program for election administrators, voter registrars, and vendors.

As one of the founders of the Election Center and the CERA program, I have been asked on numerous occasions to lecture, teach, testify, and consult on election administration and voter registration issues. During the 2000 presidential election and certification process, I was the Director of Elections in Sacramento, California, a jurisdiction at that time of about half a million registered voters. We used the now-infamous Votomatic voting system, which is essentially a punch-card voting machine. At the same time, I was the President of NACRC (National Association of Clerks, Recorders and Election Officials), then an affiliate of the NAcO (National Association of Counties) and the co-chair of a task force purposed to reform the nation's elections. In those roles I was interviewed dozens of times on the role of election officials in the conduct of election administration (98 times by media from outside the Sacramento area).

On one notable occasions, I was asked to summarize these responsibilities at the Carter-Ford (former US Presidents Jimmy Carter and Gerald Ford) hearings on election reform. The constraint of this interview was that I was to speak for exactly 45 minutes. Not 44 or 46. The hearing was being televised live.

First, I wrote a detailed description of my job, which in most parts was similar to or exactly what thousands of other election officials were doing leading up to Election Day, Election Day itself and following the election. I recorded my speech, even video-recorded it and practiced it over and over to get to exactly 45 minutes. My wife even timed me over and over again to be sure that it was precisely 45 minutes.

The day before the hearing I flew to Detroit, Michigan, and the morning of the hearing I drove to the Ford Presidential Library in Ann Arbor, Michigan. Because a former President (Ford) was in attendance the Secret Service was well represented. As I approached the parking lot I was stopped and asked to identify myself. When I gave a Secret Service agent my name and purpose for being there I was told to get out of my car and report immediately to the hearing organizer. She told me that two Congressional members had taken longer than the time they were allocated and that she was forced to reduce my time to 20 minutes.

The Library was filled to capacity. The only place I could find to sit and reorganize my presentation was in the men's room. I found a "seat" and began the process of removing words, sentences and paragraphs from my prepared speech. It was now a jumbled mess!

As I was introduced, I began walking toward the speakers' table, and the organizer whispered to me as I passed by, "eight minutes, you only have eight minutes." Having no time to further reduce my prepared remarks, I calmly folded my prepared testimony and put it in my briefcase. When I got up to speak, I said: "Mr. President, distinguished guests, ladies and gentlemen. My name is Ernest Hawkins, I am the Registrar of Voters for Sacramento County California and I've been asked to outline for you the role of local election official's responsibilities in the conduct of elections. Here's what I do: Candidates and proponents of measures tell me that they want to be on the ballot. I gather up all of their requests, print up some ballots, secure some polling locations, hire some folks to work at the polls, collect the voted ballots, count them and announce the results. That's about it," I said. I then asked, "How could you possibility make this complicated, worse yet, screw it up?"

With that I sat down, followed by uproarious laughter, including that of President Ford. From all of the media coverage during the previous weeks most everyone in attendance was aware that elections were far more complicated than I had just summarized.

Several organizations, including the Carter-Ford Commission, went on to write reports suggesting how law and policy needed to change. The eventual outcome was Congressional legislation called The Help American Vote Act (HAVA), a bill that, among other things, created the Election Assistance Commission (EAC). The EAC was charged with the distribution of billions of dollars in Federal funds to modernize outdated voting equipment across the nation. In addition, the EAC was tasked with "helping America vote" by mandating that it help election administrators by

providing guidelines, checklists, "tool boxes" and other educational tools and aids. Many other provisions of the legislation were designed to help voters. In addition to the Federal funds that HAVA provided (the first in the history of the United States), the training and educational opportunities that were supported by those funds were the most significant, in my opinion.

In 2019, we see even greater need for more training in all areas of elections. With millions of individuals working on different parts of election operations, it is very important that everyone knows what they are doing. Election administrators have always suffered from a general lack of understanding among the public and policy makers about their responsibilities. Media attention has increased the public's understanding, although sometimes that places election officials in a negative light. Following the 2000 presidential election there was extensive media exposure to some of the details, particularly the ballot count and certification process. "Chad" became a household word. The security of elections has become a common topic after the 2016 election as well as the hacking of databases, and other cyber problems. Training continues to be important because situations are constantly changing. One bad call by any of these million plus individuals can have a catastrophic result by creating widespread doubt about the integrity of the election process in America.

CHAPTER 14

State Support for Local Election Offices

Lori Augino

Abstract Cooperation and coordination between state and local election offices is an integral part of election administration. Ensuing that the expertise of local government officials is integrated into decision-making processes is one of many ways to solidify a strong relationship between the state and local governments. Presented are the processes that are used in the state of Washington to ensure that the state election office is providing support to local election officials and implementing policies that enhance the administration of elections and the voter experience in the state.

Keywords Collaboration • Training • Help America Vote Act • Equipment • Intergovernmental relationships • Resources

Both Secretary of State Kim Wyman and I are foundationally local election officials. I served for 18 years in Pierce County, and Secretary Wyman served as Auditor in Thurston County. As a result, we have a deep understanding and appreciation for the work that local officials do. From the first day we walked in the door of the Office of Secretary of State, we wanted to ensure that this office served our local election officials to give

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them a strong voice in what happens across the state. We worked from the beginning to include the perspectives of local officials in building a state-level structure to support those local officials. We had experienced seeing the state office at odds with the counties, and we wanted to avoid that as much as possible.

In my role as Washington's Director of Elections, I have stressed that my office is a resource for local offices. We are not adversarial; we are here to help. We respect the boots-on-the-ground experience and abilities of the county auditors and local election officials, as well as the deep commitment that they bring to elections across the state.

The Elections Division of the Office of Secretary of State contains three divisions—certification and training, voter information services, and election law support. In addition, we have open and regular communications with the county offices. All of this work is supported by a combination of state general funds and federal support from Help America Vote Act (HAVA) funds. Our efforts are described below.

Certification and Training

The cornerstone of our efforts is certification and training, for which we partner with county auditors. We pride ourselves in having a dynamic and well-run statewide training program. Our state law requires having at least two certified election officers in each county. Certification credentials are earned through initial and ongoing training, with a Washington state-specific component to ensure that election administrators are well-versed in what happens across the state. This builds consistency in how elections are conducted throughout Washington. The components of the initial training for Certified Elections Administrator are listed below and include a combination of class-based training sessions, individual work, and on-the-job experience.

Washington Certified Elections Administrator Requirements (January 2019)

- Attend a two-day orientation class
- Pass the Administrator Certification exam
- Receive an additional 40 hours of education

- 30 of these must be election-specific and offered by approved sponsors such as

  Washington Association of County Auditors (WSACA)
  Office of the Secretary of State (OSOS)
  Election Center (www.electioncenter.org)
  United State Election Assistance Commission (EAC)
  Federal Voting Assistance Program (FVAP)
  Election-related courses approved by the Election Administration and Certification Board
  Have two years of continuous service in elections
  Have a high school diploma or its equivalent
  Submit a completed application for Initial Certification

Our process for developing training is interactive. By working with counties throughout the year, we at the state level learn which kinds of training county officials need. Then we build a training regimen with both instruction from state staff and peer-to-peer training.

The certification and training team that does this work within the state office includes a manager and four staff members. Two other staffers work collaboratively to deliver cyber resiliency reviews and cyber security training to ensure we are protected as a community. This group also identifies additional equipment that may be needed, which we help to provide to counties.

This team is also responsible for conducting county certification reviews, which are legally required every five years. This is a collaborative process in which the state office reviews procedures, identifies best practices, and shares information. We give awards based on these findings, and share them among all counties so they can learn from each other. This process also identifies issues that need to be addressed. Most often, such issues are resolved on-site. Anything left unaddressed during the review process is identified in the final report. This documentation ensures quality and consistency in practice. These reviews are taken to heart and are used as positive tools.

Finally, this team also serves as policy experts. Team members answer questions from localities when problems or confusion arise. They talk through situations, identify other counties that are experiencing similar challenges, and foster connections to help. This team is the heart and soul of policy and procedures, and the team members are seen as trusted partners as opposed to adversaries.

Election Law Support

We have an election law support team that spearheads an ongoing modernization process for all parts of the election system across the state, except tabulation. The modernization began when Secretary Wyman convened a technology summit of county auditors, election managers, and election information technology offices to determine the strengths of the current system, as well as the issues and challenges the state faces. Our voting technology was purchased with the original round of HAVA funds in the early 2000s. At that time, counties were given choices about equipment; like many places, our systems were not up to date.

We are set to go live with the modernization of our election system in April 2019. In every step of our modernization process, Washington's county officials have played meaningful roles. We have put a significant proportion of decision-making in the hands of county election administrators to ensure that what we deliver as a state is exactly what local officials want and need. We have also put significant procurement decision-making authority in the hands of technology experts. They identify business requirements, develop requests for proposals (RFPs), and make budget presentations.

Within this powerful, multi-year partnership, sometimes counties disagree. As a state office, we provide an open environment for tough, consensus-building discussions. This requires a significant investment of time and resources by the Office of Secretary of State and county officials, but this work pays off in the end.

Voter Information Services

The Voter Information Services unit is designed to interact directly with voters and provides three major services. First, this team works with the counties to provide language support as needed. Second, staffers work with counties on candidate filings and help manage this process. Third, the group produces a statewide voter information pamphlet which is mailed to all of our voters to provide information to make ballot choices. Our voters love this guide. It reduces the number of calls to county offices during each election cycle, saving the counties valuable resources. This work is done by a manager and five staff members. Figure 14.1 shows the 2018 Voter Pamphlet in production.

Fig. 14.1 2018 Voter pamphlet in production

Other Efforts to Support Local Election Offices

The Elections Division organizes several committees through which counties advise our services for voters. We have the opportunity to write state administrative code and to invite code review before it goes through public ratification. Our role is to vet proposals before they are formalized for public comment. Before we release proposals, we engage local officials through these committees to provide feedback. This gives local officials the opportunity to suggest language and provide other input at a critical point in the process.

As a local election official, I was inundated with emails from the office of the Secretary of State. To address the volume, we developed a regular email newsletter, the Washington State Elections Weekly, issued on Wednesdays. Through it, we brief local offices on any emerging issues and concisely explain in plain language what county election officials need to know that week. We also use this to brief people on what is happening in

Fig. 14.2 Snapshot of *Elections Weekly*

the state election system, and to share questions and best practices across the state. This cuts down on email conversations and gives a single resource for county auditors to consult for information, with back issues available from 2013 onward. Fig. 14.2 shows a snapshot of *Elections Weekly* as it appears at the top of the email sent to local election officials.

We also host a weekly call each Thursday at 1 p.m. for live updates on the modernization project. I along with other Elections Division leaders use this weekly call to address other timely issues, address questions and concerns, and talk about whatever the local officials want to address. Local offices know that they have this regular opportunity to hear from us directly as well as communicate with each other.

Advice for Other State Election Offices

As the incoming President of the National Association of State Election Directors (NASED), I plan to share with other state election directors these successes that Washington has had in working with our county partner officials. When I have presented information about Washington at meetings in other states, I often hear from local officials asking me to discuss our approach with their state election directors about our focus on building camaraderie and trust to generate process improvements. I deeply appreciate the accomplishments of Washington's local officials. My opportunity with NASED is to help show the other state election directors that the time to build partnerships is worthwhile. It's not easy; it is an investment, but there is real benefit to true, meaningful collaborations through which state election directors share authority with county election officials.

CHAPTER 15

State Considerations in Understanding the Costs of Elections

Virginia Vander Roest

Abstract Effective training is critical for election administrators with limited resources. The State can be valuable in providing these services. Care should be taken to ensure the training and associated materials are available in a variety of formats and materials as the needs of election administrators vary across local jurisdictions and counties.

Keywords Training • Online resources • Cost

Unbeknownst to me, I started my career as a college student working part-time as a voter registration clerk for a medium-sized city in the State of Michigan in 1999. I was working on my Bachelor's Degree in Public Administration and quickly found the work was engaging, interesting, and incredibly important. My employer valued education and training and allowed me to pursue the Election Center and Auburn University's Professional Education Program certification in voter registration and

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election administration (Certified Elections Registration Administrator or CERA). I steadily worked my way up through the positions of Election Specialist and Election Director over 12 years. Those initial 12 years were during times of great change in the field of election administration.

The structure of Michigan elections varies greatly from that of most states, which typically operate elections through a county office. Elections in Michigan are run at the township and city level with the county playing a small role as well. Fun fact—prior to 2005, school district administrators and villages were also responsible for conducting their own elections. There are 1520 cities and townships in the State of Michigan and 83 counties equating to just over 1600 entities and individuals tasked with election administration for their jurisdiction; 28 jurisdictions have more than 40,000 registered voters and 1369 have under 10,000 registered voters with 857 of those under 2000 registered voters. The average jurisdiction size has 4892 registered voters.

As one can imagine this diversity and decentralization leads to a great challenge in ensuring elections are conducted properly across the State. Becoming a CERA (only the second in the State of Michigan) and working on various Election Center task forces provided me with powerful knowledge and resources that very few had access to. As I participated in education programs around the state, that became more and more apparent. This is not to say that other election administrators in the state were not professional and overwhelmingly committed to conducting elections correctly. Election administrators had the desire to learn more, but the resources are simply not there. Out-of-state travel for small jurisdictions is not a budget item and for those with larger budgets, funds allocated for training and education are often split among all of the other responsibilities of the local clerk.

In 2011, I began working for the State of Michigan Bureau of Elections as an Election Specialist concentrating on the training of local election administrators (also known as clerks) and, in 2017, I became the Training and Communications Manager. The State of Michigan has 3 employees who focus on training of 1600 election administrators and staff (~3400 in total) as well as assisting them in properly training their 30,000 election inspectors (known as poll workers in many places). The Bureau of Elections training staff are not just the primary resource for information—in many cases we are the only resource.

Michigan election law has required an initial accreditation training for all local clerks for many years. The Bureau of Elections has offered a two-day

in-person class to comply with the requirement. This was a good start, but an imperfect solution. The majority of clerks attended the two-day class in order to comply, but that's where the effect of the legal requirement ended. In theory, someone could complete the initial training and never attend another training session even 20 years down the road. In 2012, the Michigan legislature mandated continuing education for all clerks.

Training and educating clerks who have very different backgrounds, office hours, and levels of professionalism is incredibly difficult. The complexity of election law is one factor. It's certainly important to ensure that everyone understands every aspect of election law but, in many cases, the nuances of election law are rarely encountered. What is incredibly relevant in one jurisdiction may be a total anomaly in another. Many of the election administrators in Michigan work part-time and a large number hold other jobs, even full-time jobs. Their access to training can be dependent on their other employer allowing them the time off.

In 2013, the Michigan Bureau of Elections launched an online training system (Election eLearning Center) to comply with the continuing education requirements of the legislature and the reporting requirements of our auditors. These administrative requirements also led to benefits of being able to more regularly reach our audience and provide supplemental training at the relevant times.

Having an online training system has allowed us to enhance all of our training in different ways. The software to create videos and online courses is in house; we aren't reliant on a third-party vendor to generate our content. The videos are, of course, used in the online training system but they are also used to break up lectures during in-person training. These new resources have given every election administrator's office new tools. We've found that having videos available allows an election administrator flexibility. They can use them to reinforce the training they've previously attended. They can use them to train new staff members that perhaps don't need the full initial accreditation program. They may find a need to show administrators or poll workers a specific part of the process. It's hard to measure the value as we are still finding new ways in which these new materials are being utilized around the state.

However, having an online learning system has not replaced our in-person training components and there are no plans to do so in the future. Beyond the initial accreditation program, the Michigan Bureau of Elections provides several other in-person options. These classes were offered before the continuing education requirement and some are now required components of continuing education every two years.

The first required in-person class is for county clerks and clerks of jurisdictions with more than 10,000 registered voters. Those clerks are responsible for training poll workers. Before the even-numbered year begins, we conduct this in-person class to give them an overview of what they should focus on in their poll worker training programs and we provide them with new tools to help make their training more effective. Every two years, we add to our catalog of poll worker training videos and in the last few years, we have supplied a new hands-on training activity. The hands-on activities are designed so the clerk can easily slide it into their training without creating it themselves.

The local units of government have faced many budget cuts over the last ten years. Most offices are operating with fewer staff members than they had ten years ago. This equates to fewer people doing much more work and often with reduced resources. Offices may want to create videos or hands-on activities for their poll workers but the reality is they just don't have the time or technical staff available for such projects.

The second in-person required class is called Election Cycle Preparation. In the late winter/early spring of every even year, we have three trainers who visit all 83 counties to provide a 2.5-hour training session on preparing for even-year elections. It is generally a high-level overview of as many topics as we can cover, with highlights relaying the messages of change, mistake, or improvement. We use our post-election audit process (performance based) to signify areas of deficiency and to identify effects of known changes that occurred since the last even-number year election cycle.

This 2.5-hour training session may be the only time we see a local clerk in person over a two-year period, and it has tremendous value for all involved. Not only do the trainers have the opportunity to clarify topics that have been communicated to them, but the trainers learn where the sticking points are so that future communications and trainings can focus on those items that are most confusing. It's also beneficial for the trainers (who are often times the same people that answer phone calls when back in the office) to hear the realities of those who are the front lines of our process. The resources available from county to county, jurisdiction to jurisdiction vary greatly. A trainer may be in an affluent county in the morning and then travel to a struggling neighboring county in the afternoon. Even though the material that is presented is the same, the conversations at these trainings can be vastly different. Our clerks had concerns that the online system would replace our in-person components. Instead, the reality is that the online resources have allowed us to make those in-person sessions much more effective.

Our election administrators are overwhelmed with priorities. As I've traveled around the state (and the country) one thing still remains the same—those in these positions want to serve and protect democracy. They want to do the best job that they are able to do with the resources they have. And they do just that with very little of those resources. The ability of the state to provide good, effective, and timely training is critical. Even in jurisdictions and counties where there are more resources available, the state trainers and their resources serve as one less thing that local offices need to develop and deliver. Most importantly, the state training initiative provides a consistent message across all jurisdictions.

The training approach in Michigan has expanded and new methods have been implemented since I first began in elections. Laws have changed as well, and become more complicated. Public and media scrutiny of elections is very high. Training has become more detailed—there is more to know—and the same attention to every detail is still required. These pressures can shift the tone in training from one of assistance and problem solving toward a focus on policing and compliance. There is intrinsic value in having walked in the shoes of those that you train. It has provided me with credibility and trust among the election administrators around the state; although their experiences may not be identical to mine, we have a common understanding of what is supposed to happen. This advances the training conversations and moves everyone closer to addressing training issues that improve the process.

CHAPTER 16

Professional Development and Election Administration Advocacy

Lindsey Forson

Abstract Students in public administration and public policy programs often find it difficult to choose a substantive area in which to pursue a career. These are broad fields, and many different options are available. This case study summarizes the experience of choosing a substantive area for one graduate student who eventually chose election cybersecurity as her main focus. She provides insight into why she chose this policy area and why she has been successful in finding career opportunities within this space. The case study concludes with advice for students of public administration and public policy who are trying to select a specific area on which to focus their studies as well as trying to set themselves up for finding a great job and getting onto a successful career trajectory.

Keywords Professional development • Career • Election administration • Cybersecurity • Public administration • Professional association

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During the final months of 2016 and early months of 2017, I was trying to narrow in on a specific area of focus for my doctoral studies in public administration and public policy. I chose to pursue the degree because I wanted to be engaged in research geared toward finding practical solutions to current problems in public administration. I was pursuing my doctoral degree through the Department of Political Science at Auburn University, a department with a nationally renowned election administration program. Initially, I did not have any intention of studying election administration, but as I was soul searching for a substantive area of focus, something else was going on. The security and integrity of the 2016 US elections were being called into question by the media, by high-ranking government officials, and consequentially by the American public. The outgoing presidential administration declared election systems part of the "critical infrastructure" of the US in response to intelligence reports that foreign actors attempted to interfere with our election. Meanwhile, the newly elected US president made claims of massive voter fraud. The American people were receiving conflicting information from a variety of sources, and many were left wondering whether the results of the 2016 elections could be trusted. I wanted to study a current problem, and I knew I may have my answer. I registered for an election administration course, and my career trajectory unfolded before me.

Recently, I joined the team at the National Association of Secretaries of State (NASS) as the Cybersecurity Program Manager. My main responsibilities include managing the Association's relationships and information sharing related to cybersecurity for the offices of secretaries of state and the state government functions they oversee. My perspective is that of someone who has newly reentered the workforce after two years of academic pursuits. At the time of writing, I have only been with NASS for a few months. Over the past two years, I completed my doctoral coursework at Auburn University in the public administration and public policy program while also engaging in applied research related to cybersecurity and disaster preparedness in US election administration alongside my professors.

This case begins with an overview of my academic experience. Then, I discuss my transition to a professional career which directly relates to my areas of study. Next, I review how my academic experiences have prepared me for my new position and what challenges I still face. I conclude with tips for students who find themselves where I was in December of 2016—needing to select a substantive area of focus but nervous about making a decision that could largely determine their career paths moving forward.

My Academic Experience

Shortly after the 2016 elections, I took my first election administration-specific course. As most graduate courses do, this election administration course allowed flexibility regarding specific topics of study. From day one, I was interested in the election security issues which dominated the headlines of the time. It was exciting to dig into election security issues during this class and then in larger applied research projects because they were unfolding before our eyes. Although election administrators have been focused on security issues throughout their careers, attempts by Russian actors to interfere in the 2016 elections launched this issue to the forefront of election administration as well as US politics and political discourse more broadly. For better or worse, election cybersecurity, as a policy area, was growing and changing at a rapid pace.

As a student, this created challenges and opportunities. Information was changing, almost daily. Media stories, and even some government reports, conflicted each other. The area was fairly new to academics of public administration and public policy. Though voting technology has been a topic of study for scholars of information security for years, election cybersecurity had not been studied from the standpoint of public administration and public policy. As an inexperienced researcher, trying to figure out where to begin when a research foundation does not exist is a daunting task. Even working with professors who are very experienced scholars, we struggled to find a starting point as we embarked on research in this area. Alternatively, as a graduate student who was preparing for an applied professional career, this put me in a unique position. I could stay at the cutting edge of this policy area. I did not have decades or even years of policy briefs, government reports, and academic articles to review on the topic. Rather, I could keep up with information as it was released. Reports and other documents were being released at a rapid pace, but I was fully engaged and was able to keep up with the information quite well.

I learned that there are so many aspects to the issue of election cybersecurity, all of which the federal government, state governments, local governments, non-governmental organizations, and academics were attempting to swiftly address and some of which we were better positioned to tackle than others. Election cybersecurity is a coordination issue. It is a communication issue. It is a training and preparation issue. It is a human resource issue. It is a budgeting issue. And, of course, it is a technical cybersecurity issue. As an election administration community, we face challenges and opportunities in each of these areas.

Through a teaching experience I was able to understand election cybersecurity through one of the most important perspectives—intergovernmental relations. I had previously taken a graduate course in intergovernmental relations and, during my last semester of doctoral coursework, served as the teaching assistant for this course. At this point, my studies were fully focused on election security issues. I began to look at the election cybersecurity issue through its complex and ever-changing intergovernmental perspective. In the US's federal system of government, every single policy and administrative area is intergovernmental in nature. This is particularly true for election administration which is a system that is decentralized across US states and localities and is heavily reliant on private-sector vendors. As the cybersecurity issue progressed during 2017, the federal government took on an increased role, increasing the intergovernmental complexity of the issue space and creating both tension between the federal government and states and localities and an increased need for coordination. This perspective prepared me for my current position which essentially requires me to manage intergovernmental relations in this policy area.

While I studied this issue in an academic environment, I got the opportunity to attend several conferences and events, both practitioner-focused and academic-focused. I attended the *Inclusion and Integrity Election Symposium* hosted in 2017 by Auburn University and the Election Center during which I heard presentations on election security from the perspectives of state and local election administrators, association leaders, and election technology vendors. I attended another Election Center conference where I saw election cybersecurity presentations, related to many different aspects of the issue from how to communicate with voters to what technical safeguards are necessary, from the Center for Internet Security, the Department of Homeland Security, and an election technology vendor. I presented my own research on the topic at the NASS summer conference while also attending other presentations. I also presented my research and learned about relevant research from other academics at the *Building Better Elections* workshop, a pre-conference workshop to the American Political Science Association's annual conference, and at the Southeastern Conference for Public Administration. Through each of these opportunities, I not only learned new information about election cybersecurity, I also got to learn about the relevant organizations and even individuals working in this space. Further, I was able to make personal connections with many of these individuals.

Transition to the Professional Environment

As I have begun my own career in the election cybersecurity arena, I have come to fully realize the value of these experiences. Instead of the flurry of new information and new faces that one usually faces when beginning a new position, I was already familiar with much of the relevant information; I had previous knowledge of the roles of almost every individual I have met through my new job; and I have the benefit of having a personal connection with many of my new colleagues. Furthermore, it was the connections of my academic advisors and connections I made through the experiences described above that allowed me the opportunity to be considered for my current position. These experiences also allowed me to find a position that is an ideal fit for me.

As with any new job, I have still faced challenges related to transitioning into a new position in this space, and I am bound to face more. Election cybersecurity remains a rapidly progressing and changing policy area. There are many differing and even conflicting opinions about the right steps for safeguarding elections. There have been many bridges built across various actors and organizations in the past two years, but, at the same time, walls have gone up. No matter how well one understands and is prepared to work within complicated intergovernmental politics, it will always be a learning experience in a new position and a constant challenge in your day-to-day work. One must intimately get to know all of the relevant actors and understand their positions and interests. One must earn trust and build relationships in their new work environment. This comes down to the simple things—be a hard worker; remain eager to learn; and always look for ways to build bridges, not walls.

Tips for Students

Be Open-Minded

It is okay to go into your public or election administration education with ideas about what topics you want to study or even one area you are especially passionate about, but remain open-minded and open to new opportunities. These fields are dynamic. Something new can rise to the forefront any day. I came into my public administration program not thinking I wanted to study election administration, but because I was open, I came across an area of fundamental importance to this country that needed

capable and hardworking young talent. Being open-minded allowed me to get involved in an exciting, important, ever-changing policy space, and it opened doors for multiple career opportunities.

But, Be Willing to Commit

On the flip side, be willing to commit once you find the area that's the right fit for you. Find your thing, and then be all in. For me, this was initially difficult. There are so many important problems to tackle! But I eventually committed fully to one substantive area, and this is what has allowed me to gain so much knowledge in such a short period of time. I spend several hours on the average day studying election security issues and keeping up with the latest developments. This is also what has allowed me to make so many connections. My professors know the "right" people to introduce me to because I have committed to an area of focus, and they are willing to make those connections because I have become knowledgeable enough to have intelligent and productive conversations with anyone in the space. I am not suggesting you can never change your mind or follow a new opportunity. But if you can find a topic that you are excited enough about to plan your career around, at least for the foreseeable future, this will lead to connections and opportunities. Just don't expect to find that perfect topic on your first day of classes, or sometimes even during your first year.

Choose Something Current

So, you are trying to find a topic about which you are passionate enough to commit. Where do you start? Watch the news. Look at the issues dominating the headlines. Look particularly for issues that are "new," are receiving renewed attention, or are being viewed from a new perspective. If you find an issue that is currently unfolding or currently transforming, you can position yourself at its cutting edge which will undoubtedly lead to career opportunities!

Build Strong Relationships with Your Professors

Building strong relationships with your professors begins with being successful in their classes. This, of course, means making good grades. But it also means turning in work that will stand out and being highly engaged

in class discussions. If you are in graduate school, remember that everyone is an above average student. You need to find ways to set yourself apart. Also, talk to your professors about their areas of interest. It can help you find something you may be interested in. Choosing a topic that aligns with a professor's interests can provide you with a natural mentor and someone who can help you make the right kinds of connections. Just be sure you have done everything you can to earn that professor's respect before you begin asking them to collaborate or to help you.

Take Advantage of Opportunities

Getting a degree, which usually occurs alongside many other work, family, and community responsibilities, makes for a busy life. But you must find ways to take advantage of opportunities you are given. Traveling to conferences has not always fit perfectly into my schedule, but I always try to make time for them. This has paid off in so many ways. Attending conferences has allowed me to become more knowledgeable and has allowed me to meet so many people and make important connections. This led to the opportunity to be considered for my current position, has made my transition into the position smoother, and will undoubtedly make me more effective in my new role. Once you earn the respect of your professors, they will present you with opportunities. If they tell you something is important, trust them. It just might lead you to your dream job!

CHAPTER 17

How an Election Administration Student Evolved into an Election Professional

Blake Evans

Abstract Election administration is an opportunity to serve citizens by ensuring they are equipped with the tools needed to express their voices through voting. The field of election administration is rapidly evolving to require specialty skills from a variety of professionals. An educational background in election administration can contribute greatly to the success of election administration professionals. This case examines the details of a county-level election administrator's education, and discusses how election-oriented college experiences can influence early career professionals.

Keywords Election administration • Education • Professionalizing • County-level • Practitioner • Academic

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Introduction

The election administration field is quickly professionalizing. More people are entering the field who are specialists in data analysis, information technology (especially cybersecurity), Geographic Information Systems (GIS), and personnel management. I am excited to be part of a new wave of students who view election administration as not just a job, but a career choice where we can make a difference by preserving one of our nation's most vital democratic practices. This case study will first examine how I selected the election administration field as my career choice. Second, it will detail how I entered the field after college and the evolution of my role in the Escambia County Supervisor of Elections office (the first county-level office I worked in). Third, I will discuss my college election education, and I will highlight three takeaways that have been significant to my career. I believe it is important for me to discuss how my professional role has evolved before reflecting on my academic career because you cannot truly identify the educational benefits until you understand my role as an administrator in a county-level elections office. Finally, I will conclude with a discussion about applying my election administration education as a practitioner, and I will also make recommendations to academics and students who are interested in the field.

How I Found the Field of Election Administration

Since working in election administration, I have talked to many professionals who have indicated they did not start their careers intending to work in elections, but instead they stumbled into their profession. That is not how I found the field. I deliberately chose election administration as my career path in college because I viewed it as a natural progression for me based on past experiences, and I also viewed it as a way I could do valuable and fulfilling work. Through reflection, I can tell that my route to working in elections was rooted in public service and community engagement values. The remainder of this section will discuss how my experiences as a teenager and college student directed my path toward election administration.

I grew up in a small town in central Alabama that my family resided in for many generations. We had a strong connection to the citizens living there, and my parents always encouraged community engagement. As a teenager, I took part in many service projects around my hometown and

beyond. Those experiences developed my values because I realized that I could make a difference in the lives of others through service.

As a freshman at Auburn University in the fall of 2010, I continued to search for ways to get involved in my community. One opportunity that was particularly influential was the Living Democracy Initiative, which was a living-learning experience that allowed me to live for ten weeks in a rural west Alabama town to experience how that community functioned. I worked closely with the mayor and others in City Hall on multiple projects, and I attended civic group meetings that gave me an informed perspective on how community leaders and citizens approach public problems.

Living Democracy was the first time I had worked in something similar to a public service environment. After graduating Auburn in the spring of 2013 with a BA in Communication and a Minor in Community and Civic Engagement, I continued my education by entering Auburn's Master of Public Administration program. It was during that time that I could select one of three course tracks for my masters the supplement the general public administration curriculum: (1) Election Administration; (2) Economic Development; or (3) Nonprofit Organizations and Community Governance.

My experiences as a teenager and as a student had instilled in me values of democracy, community engagement, and public service. Only one track made sense for me and the person I had become: Election Administration. I viewed the field of elections as a way I could work in a public service environment to equip citizens with the tools they need to begin solving public problems through voting.

Entering the Field of Election Administration After College

In August 2015, I began my professional career in election administration by joining the Escambia County Supervisor of Elections Office in Pensacola, Florida. I quickly learned the way elections are managed in Florida. Each county has one supervisor of elections, and most supervisors are elected. Additionally, Florida is a closed primary state, and there are three ways for citizens to vote: (1) In-person on Election Day; (2) In-person Early Voting; and (3) No-excuse Vote-by-Mail.

As of early 2019, Escambia County had about 215,000 registered voters, 73 polling locations, and 79 precincts and the office consisted of about 12 full-time staff. During election years, we added 15–25 temporary staff members to assist with answering phones, warehouse work, troubleshooting equipment, processing registrations, and responding to voter requests.

During my first year with the office, my duties included polling location management, election worker training, poll watcher management, data analysis, and voter registration data entry. When I began work in August 2015, the office was preparing for the upcoming 2016 election cycle, which consisted of three elections: (1) Presidential Preference Primary in March; (2) State and Local Primary in August; (3) Presidential General in November.

My first few months on the job were dedicated mostly to data entry to update voter registration records and polling location management. A significant responsibility for me was to ensure locations were committed to being polling places, and to ensure they were accessible for all voters by conducting site surveys. As the 2016 election cycle approached, my duties expanded to include election worker training and poll watcher management.

Before the Primary Election in August, our office had discussions with members of the University of West Florida's (UWF) Haas Center about partnering to execute a voter satisfaction survey. I helped develop the survey by researching similar projects conducted by other jurisdictions to determine the types of survey questions that would be most beneficial to our office. Additionally, I spoke with academics who study elections, Dr. Robert Montjoy of Auburn University and the University of New Orleans, and Dr. Charles Stewart, III, of the Massachusetts Institute of Technology. Through our partnership with UWF, we conducted the project during the Primary and General Elections. We released the results from the survey in early 2017, and we touted the project as a successful partnership between a county government office and a local university. Our office used the data from the survey to measure and improve many of our processes, such as our election worker training procedures.

Following the 2016 election cycle, my responsibilities increased to include supervising daily warehouse operations and managing our office's GIS duties. A significant portion of my time in 2017 was dedicated to improving our voter registration system's streets database. Prior to this, I did not have any GIS experience. However, after receiving training, I coordinated an effort by our office to perform maintenance on and make improvements to our streets database. Our goal was to help voters by ensuring that each one was registered in his or her correct precinct. We also wanted to reduce the risk of data entry errors by ensuring that only valid residence addresses were in the registration system. The project was very challenging but also very rewarding. As a result of the project, our office ensured the accuracy of our voter registration database, and we reduced the risk of manual data entry errors.

How My Academic Experiences Have Influenced My Career

There are many dynamics of administering elections that cannot be prepared for in a classroom setting. For example, it is difficult to simulate all of the processes that must occur to train over 500 election workers in a five-week span for a Presidential Election. However, there are numerous characteristics of an election administration education that are important and unique. Through reflection, I have identified three takeaways about my election administration education: (1) My education created a holistic, well-rounded framework through which I viewed the field when I started my career; (2) Many aspects of my education have been helpful and provide knowledge and skills that directly apply in the field; and (3) My education equipped me with skills, both tangible and intangible, that have helped me adapt to my job duties and gain more skills later.

First, I appreciate that I entered the field of elections with a holistic viewpoint of it. Through a class taught by Dr. Montjoy, I learned about the history of elections and the ways that they have been administered over many decades. I also learned about concepts such as single- and multi-member districts, gerrymandering, redistricting, and many others. These concepts, while basic, provided me a database of knowledge with which to begin my career.

My holistic viewpoint of election administration was further formulated through the internship I had with the Election Center, which is the National Association of Election Officials. While interning, I worked on projects where I researched Professional Practice Papers (papers that document best practices from the field), I attended multiple conferences as a presenter, and I assisted in administering Certified Elections Registration Administrator (CERA) classes. Researching diverse best practices and networking with many professionals at conferences and CERA classes provided me a wealth of practical knowledge, and it also taught me about the decentralization of the elections field. What works best for one jurisdiction might not work as well for another because of differences in policy, population, people, location, and many other reasons.

Second, many aspects of my education provided knowledge and skills that directly apply in the field. One of those aspects was the ability to interpret statutes thoroughly and efficiently. Studying election law and court cases provided me with practice that taught me how to interpret statute,

a skill that is necessary for any practitioner. Almost all aspects of everyday duties are framed by statutory guidelines, regulations, and deadlines that must be met.

Also, the ability to understand how public budgeting works and the process through which funding occurs is important. Taking a class on public-sector budgeting provided me with practical skills that have made me a better election practitioner. The class reinforced the importance of fiscal responsibility and respecting citizens when trying to allocate tax dollars. Practitioners must often determine how to best utilize limited financial resources to deliver voter services to citizens, and I rely on knowledge gained in my budgeting class to help me make those types of determinations.

Third, my education equipped me with skills, both tangible and intangible, that have helped me adapt to my job duties and gain more skills as I have encountered different challenges. My college experiences were invaluable in many ways because they trained me how to make progress when faced with difficult problems. While I might not have been taught tangible skills about working with GIS systems, finding a voter in a voter registration database, or even processing a registration application, I was trained to think critically, analyze data, and evaluate processes.

I have never once written a policy memo since I started working in elections; however, classes that dealt with public policy analysis and program/project evaluation were particularly helpful because they taught me how to identify and dissect large problems and find solutions to them. They also taught me to set measurable goals and measure data points to determine progress. These types of skills proved especially beneficial to me during the GIS project that I worked on, as well as the voter satisfaction survey that our office conducted.

Discussion and Recommendations

It takes all kinds of people to coordinate an event as large and important as an election. The elections field needs practitioners who specialize in community education and engagement, teaching and training, information technology/cybersecurity, GIS, and many other areas. For that reason, I recommend that academics look far and wide for students who would be good candidates for an election administration education.

Additionally, academics should prepare students for lifelong learning. College teaches many skills that will prove useful, but students need to be prepared to become part of an elections team by adapting and serving

where needed. They need to be team players first and foremost. They also need to know that election administration is not glamorous. It is always about the fine, nitty-gritty details. Further, students should expect a transition period as they go from always having studied the big, decentralized picture of elections to having a role in an elections office.

Finally, students of election administration have a unique skillset that should be utilized appropriately. We care about data analysis and process evaluation, and we want to find ways to improve practices. We have a holistic, well-rounded mentality that gives us a unique perspective as we transition from student to practitioner. I am fortunate to have worked with supervisors and other team members who have been interested in using data and who have always looked for ways to be on the leading edge of election practices.

CHAPTER 18

Observations and Lessons from Election Administration in Nigeria

Tyler St. Clair and Shaniqua Williams

Abstract The consolidation of democracy in transitioning governments is a topic of interest for established nations around the globe. As Auburn University graduate students who have focused on election administration in the United States, we found that the opportunity to observe elections in a comparative perspective created a unique learning experience. In February 2019, Nigeria was preparing to host their sixth democratic election since the end of military rule in 1999. Although these elections were expected to be the next step in launching the country forward as an exemplar of democracy, they were instead delayed at the last minute due to logistical issues. The response from the electorate was immediate: institutions and the electoral process were questioned and officials were criticized. Our in-country observations illustrate the true costs of postponing the presidential election and the impact that the decision to postpone the election had on the democratic process in Nigeria.

Keywords Elections • Nigeria • INEC • YIAGA • Auburn • Comparative • Corruption • Administration • Democracy • Observers

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As graduate students in the Master of Public Administration (MPA) program and doctoral program in Public Administration and Policy in the Political Science department at Auburn University, we have become intimately involved in studying election administration. As Auburn is home to the largest election administration faculty in the nation, it is only natural for students to be encouraged to pursue studies in this area. Up until this point in our work, we had focused solely on elections in the context of the United States and had not studied elections in the international context.

The offering of a comparative elections course in the spring of 2019 was an interesting change in the scope of our research. When we were offered the opportunity to travel to Abuja, Nigeria, as election observers, we saw the opportunity to gain a new comparative perspective to use when considering our course assignments and readings. This trip allowed us to compare our knowledge of the electoral process in an established democracy with the electoral process in a country that is experiencing democratic consolidation. What challenges does this present to us as students, especially when we consider Nigeria and its history, and the implications of this election cycle? Comparing our conventional knowledge with a transitioning democracy serves as the basis of our case study.

Unlike in the United States, the voting and registration process in Nigeria is centralized. The agency responsible for voter registration and voting is the Independent Nigerian Electoral Commission (INEC). INEC comprises 13 officials who are appointed by the President.

In order to be accredited as election observers, we partnered with Youth Initiative for Advocacy, Growth and Advancement (YIAGA), a Nigerian-based non-governmental organization. YIAGA has chapters across Africa and mobilizes citizens in the form of a data-gathering campaign to observe polling place practices. We worked closely under Samson Itodo, Executive Director, and Cynthia Mbamalu, Program Manager. YIAGA utilizes the Parallel Vote Tabulation (PVT) methodology to observe and gather data from election day observations. This method consists of a detailed text message code that deployed observers use to report back to the data center in real time. While we were able to participate in a pre-election data simulation exercise and visit several INEC offices in the local government areas surrounding the Federal Central Territory in Abuja for pre-election observation, we were not able to experience the PVT process in practice due to the decision made by the INEC to postpone the election by a week. Although we did not observe on Election Day, we were able to better understand election administration in Nigeria by attending

the YIAGA and Situation Room press conference, the International Briefing for Accredited Observers (Domestic and Foreign) for the 2019 General Election, and by witnessing current president Muhammadu Buhari and former vice president Atiku Abubakar sign the National Peace Accord in which both candidates agreed to ensure that their followers will respect the peaceful transition of power. Over the course of our week in Abuja we experienced and observed a number of events designed to provide observers with critical information for the upcoming elections. However, it was not until the final day of our trip that we began to truly understand the administrative environment in which the elections in Nigeria were being conducted.

To begin, we should start at the end. Once it was announced in the early morning hours of Saturday, February 16, Election Day, that the Independent National Electoral Commission (INEC) was postponing the election, we had a meeting with Samson Itodo, Executive Director of YIAGA, as well as members of his team for a final debriefing. As we went around the room discussing what we found most interesting, Samson made the comment that "Nigeria [through its election administration processes and procedures] is paying the price for the cost of corruption."

How do we define the administrative cost or burden of corruption? First, Nigeria still relies on fingerprinting ballots and manually counting them one by one. Second, only one voter is permitted in the polling unit at any given time during Election Day. According to INEC, the average time for a voter to cast their ballot lies somewhere between two and five minutes. Nigeria has over 84 million registered voters.[1] If a polling unit has 500 registered voters at 2 minutes each, that would take roughly 1000 minutes, upwards of 16 hours for all voters to participate. In a day where voting only occurs between 8 AM and 2 PM, the time allotted is not adequate to address the time needed. In this process which is designed to promote security, time becomes a significant cost for the average voter, whether it be in travel or time spent waiting to cast a ballot.

From our conversations with stakeholders, we learned that Nigerian governance has a long history of corruption and intimidation, and Nigerians are uniquely sensitive to the impact that unseen forces can have on the political direction of their country. Past corruption breeds future suspicion and the lack of transparency from the Independent National Electoral Commission leading up to the postponement of the February

[1] Independent National Electoral Commission. 2019. https://www.inecnigeria.org.

16th presidential election led to unsurprising backlash from Nigerian citizens. What was supposed to be seen, and could still be seen, as the next major step forward for Nigeria in establishing itself as an exemplar of democracy in Africa has, for the moment, sown distrust and anger among the electorate.

While INEC operated under the guise of efficiency, they over-estimated their capacity to address the logistics of administering the election.

Nigeria has the largest population on the continent, which presents a number of challenges—how do officials access remote areas where paved roads do not exist? Can they airlift materials, or will they be transported by truck? As Nigeria does not have absentee voting, many citizens must travel back to their home state to vote—for many in Nigeria, this is no small task and requires a significant investment of time and resources to accomplish. Nigeria's population consists of 190 million individuals. There were 72 presidential candidates alone in the election cycle, the most ever for presidential election in Nigeria. There were thousands of security forces being deployed on Election Day—4030 non-security personnel and 8000 special protection personnel.[2] The total estimated cost of the election itself hovers around 198 billion US dollars, which equates to 6.5 US dollars per voter.[3]

With such a large population, the number of places to vote must also be large. In Nigeria, there are 119,973 polling units across the country; in areas where the population exceeds the maximum number of voters per unit (voting units should have no more than 750 registered voters), there are multiple voting points, 57,073.[4] These are spread between urban and rural areas, with varying degrees of difficulty in access. Transportation of materials, both sensitive and non-sensitive, can be difficult.[5] For example, in remote areas that do not have quality infrastructure, airlifting materials in for election day is an optimal means of transportation.[6]

[2] Mohammed Adamu. Inspector General of Police. INEC briefing. February 12, 2019.

[3] Antonia Okoosi-Simbine. National Commission. INEC budget, INEC briefing. February 12, 2019.

[4] INEC briefing. February 12, 2019.

[5] INEC distinguishes between sensitive and non-sensitive election materials. Sensitive materials include ballot papers, smart card readers, and results sheets, while non-sensitive materials include everything else.

[6] According to INEC this was not feasible, and materials were instead loaded on to trucks for transportation, delaying delivery and further slowing the process.

As in many African countries, security concerns remain a constant problem. In Kano State, ballot papers were intercepted and taken; a state governor's convoy was attacked by a faction of Boko Haram.[7] INEC offices were firebombed and the materials inside destroyed. In Anambra State two containers of sensitive materials including smart card readers were also destroyed.[8]

Even after numerous INEC offices were attacked and materials burned, smart card readers destroyed, and so on, INEC continued to reinforce the message that they were prepared to conduct the election.

When discussing the election, the overarching concern regarding the Nigerian election was safety and security. Nigerian officials from the government and political parties both called for peace and calm during the process. Foreign dignitaries seemed intent on reinforcing the message that Nigerians should take this election as an opportunity to show the world that they too were capable of conducting an election unmarred by violence and intimidation, one that would give each citizen the chance to cast their ballot without interference. At a YIAGA press briefing the day before election day, US Ambassador Symington stated, "We have for weeks talked about free, transparent, and now let's stress peaceful elections. For that is the essential task … The peace and security of the vote tomorrow is the job of every Nigerian. Every single one." This sentiment was echoed by fellow ambassadors and leaders of International Non-Governmental Organizations (INGOs) throughout the briefing.

What we failed to see, and what ultimately seemed to be of greatest consequence, was not the security of the election but instead the ability to actually administer the process to Nigerian voters around the country. While security concerns were warranted, they were not believed to be of greatest impact in the decision to postpone the election by INEC. Their decision to postpone due to logistical concerns related to the delivery of sensitive and non-sensitive election materials suggests a different calculation of cost for the 2019 presidential election.

The true costs lie somewhere between the tangible inputs and lack of an outcome satisfactory to the citizenry at large. INGOs and civil society organizations poured time, money, and manpower into mobilizing

[7] Ruth Maclean and Eromo Egbejule. "Nigeria postpones election just hours before polls due to open." *The Guardian*. February 15 2019. https://www.theguardian.com/world/2019/feb/16/nigeria-postpones-election-just-hours-before-polls-due-to-open.

[8] Akoh Godday. "INEC confirms destruction of smart card readers." *Naija News*. February 12, 2019. https://www.naijanews.com/2019/02/12/inec-confirms-destruction-of-smart-card-readers-as-fire-guts-office/.

citizens, promoting transparency, and encouraging every Nigerian to get out and vote. The Youth Corp was mobilized to polling units and points around the country as part of their civic duty to their nation.[9] Materials were transported to various INEC offices with the intent of being used. The lack of outcome came when, despite the multitude of inputs utilized in preparing for Election Day, the Nigerian electorate were unable to exercise their right to the democratic process and cast their ballot for the leader of their choosing. The ultimate cost is the loss of confidence Nigerians place in their government institutions that exist to protect their ability to participate in self-government and construct a future that is uniquely and genuinely Nigerian.

One of the themes noticed throughout the week was that, while Nigerians were optimistic for a successful election this cycle, they were cautiously so. Democracy doesn't develop overnight, and even the most developed of countries has administrative growing pains from time to time. Nigeria is a relatively young independent country, and because of their youth the progress they have made should be commended. However, Nigeria must continue to move forward with each election, inch by inch, to assume the leading role in Africa that many believe they can fill. As was said by many foreign observers and diplomats, where Nigeria goes, so goes the rest of Africa—and while Nigeria may still be paying for its past, it is certainly making strides toward a brighter future.[10]

[9] The National Youth Service Corp in Nigeria is a national service program geared to promote pride of country and service to their fellow Nigerians. http://www.nysc.gov.ng/aboutscheme.html.

[10] The Nigerian election took place on Saturday, February 23, 2019, one week after the original scheduled election date.

CHAPTER 19

The Role of Professional Associations in Supporting Election Administration

Tim Mattice

Abstract The creation of professional education programs for election administrators requires not only a thorough understanding of the varying structures and administrative responsibilities for election administration across the United States but also an understanding of approaches for adult education. As many election officials come to the field with limited, if any, formal education in election administration, providing opportunities not only for education but also for networking is essential to creating a more professional cohort of administrators. This case focuses on the creation of the first professional association and education program for election administrators in the United States.

Keywords Professionalism • Election Center • Help America Voter • Auburn University

I have had the good fortune to be involved in adult education for 34 years, 23 of those years working in some capacity in election systems both at the state and at the local level.

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In choosing a case study topic to contribute, I decided to look at the past 20-plus years and explore the timeline, from my perspective, of adult education and the role it has played in the professionalization of election administrators.

In the 1980s it was not unusual that election administrators remained in their jobs for 20- or 30-plus years. Working in elections became their career path despite their admission that the elections field was not necessarily their first profession of choice. However, once found in this role, elections got in their blood and despite challenges in pay, lack of public affirmation, and availability of resources, they endured. Election officials at that time were focused on their own jurisdictions maintaining voting systems, recruiting poll workers, securing poll sites, and acquiring the resources needed to prepare for the next election. Federal and state legislation on occasion required election officials to institute changes in their operations but, for the most part, the administration of elections was business per usual according to state rules and regulations and change was minimal from election to election.

Some election officials, like county clerks, not only wore voter registration and election administration hats but were responsible for other duties which could include filing vital records, or important documents related to a specific county's population, including birth, death, and marriage certificates. The county clerk, depending on the state, may also have to file and process residents' passport applications and property deeds, administering department of motor vehicle programs, issue county IDs, give and file licenses for local doctors and business owners. Some county clerks also confirm and license notary publics and sometimes officiate wedding ceremonies.

Public perception dictated to a certain degree that election officials worked just two days out of the year, the primary and the general election. The election official's job was to register people to vote, maintain the voter registration files, and locate sites in their communities for voters to come on Election Day to cast their votes. Election officials were viewed as public servants but the election official wasn't viewed through the same professional lens as other health and human service-related professions such as a nurse, physician, pharmacist, social worker, teacher, lawyer, or engineer. Public perception prevailed that election officials only worked two days per year—so how challenging could their jobs really be?

In the late 1980s election officials began to communicate issues between states, including election systems, organizational configurations, and

operational methodology. The Election Center, also known as the National Association of Election Officials, at the time was instrumental in jumpstarting the National Association of State Election Officials (NASED). At the time, a handful of state election directors including Tom Wilkey (New York), Tom Harris (Texas), and Chris Thomas (Michigan) among others worked to create an association where state election directors would have a forum to discuss and share information related to important issues like voting technology certification and a formal network to communicate election issues between states and provide a vehicle to impart critical operational impacts to Congress when new legislation was being introduced. Ultimately, during the 1980s, NASED developed and maintained the first voting system certification program in the United States. NASED's membership included the 50 states, the District of Columbia, and 5 of the US territories, and there was no central office to manage the association's operations. At the organization's inception, the Council of State Governments became the administrative arm for the association until 2005, when the Election Center was asked by NASED leadership to take over the fiscal and administrative responsibilities for the organization. At this time, the Executive Director of the Election Center also took on the added role of NASED's first Executive Director. The Election Center continued in the role of NASED Secretariat for over a decade; it was responsible for coordinating biannual NASED conferences, maintaining the membership database and collection of dues, and creating and maintaining NASED's first website. As Secretariat, the Election Center also created NASED's first electronic registration system for biannual conferences and payment of dues including management of all of the finances for the organization. The Election Center also conducted surveys for NASED. The surveys were requested by state directors, developed via an online tool, and sent out to state directors and their staffs. Results were then compiled and disseminated to the association membership. Creating agendas for NASED events, recruiting federal, state, election services partners and other professionals with knowledge in election and voter registration issues as speakers for NASED conferences, and providing the opportunity for state directors and their staffs to fulfill mandatory Continuing Legal Education obligations at certain conferences were some of the responsibilities that the Election Center assumed in managing the NASED organization through the Secretariat.

Prior to 1989, there were no professional associations exclusively for election administrators. Many attended the National Association of

Secretaries of State (NASS) meetings to learn about developments in election administration. The National Association of Secretaries of States has been in existence since 1904, the nation's oldest, nonpartisan professional organization for public officials. NASS served as a medium for the exchange of information between states and fostered cooperation in the development of public policy. The association had key initiatives in the areas of elections and voting, state business services, and state heritage/archives but election administration was just a piece of their purview.

In the late 1980s and early 1990s, a small group of election officials began a conversation about what could and would professionalize the election officials' job, and would recognize the proficiency level needed for election officials to carry out the responsibilities which were more than providing the means to register eligible voters, maintaining voter rolls, securing, storing, testing and setting up and maintaining voting equipment, recruiting and training poll workers, counting the vote and officiating the results. Other professions had licensing requirements, specific academic requirements that defined who they were as professionals, what they did, and how they did it. These professions included codes of conduct and standards and principles that held the professional accountable in order to maintain his/her status in their profession.

So the conversation ensued and the question was asked, why not develop academic requirements, standards and principles, and codes of conduct for election officials? The academic connection was key in creating a program that substantiated the role of the election official to county, state, and federal leaders as a profession necessitating a complex skill set for those who truly were the gatekeepers of democracy. Election officials needed to know the history of voting to put their current profession into a historical perspective. They needed to know the fundamentals of ethics, how to communicate effectively with the public, the media, candidates, and with state and federal officials. They needed to know how systems worked and how to implement new programs. They needed to have an understanding of federal laws and planning and operating budgets, and so on. All these ingredients were included in courses that would be recognized within higher education, in a range of topics that melded election administration with principles of public administration and concepts to create a national certification program for election administrators.

The Election Center or National Association of Election Officials has been offering conferences and workshops for election officials since the mid-1980s. Partnering with Auburn University, an accredited academic

institution, they began to collaborate and develop a series of classes that would set the stage for the first established certification program available for election administrators in the country. By the early 1990s, initial courses were developed and offered to election officials at Election Center venues across the country, with the goal of completing a specified level of content included in a set number of courses. Completion of the series of classes would culminate in a professional certification through the Election Center and continuing education units at Auburn University that could later be applied to further an election official's post-secondary education.

The Election Center and Auburn University's professional education program was the first and remains the only opportunity for election officials to achieve a level of professional certification within the elections profession. In 1995, the first group of election officials graduated as Certified Elections Registration Administrators (CERA).

The need for a certification program became even more apparent after the presidential election in 2000 and the adoption of the Help America Vote Act (HAVA). This legislation changed the role of the election administrator and set them on a path that necessitated an advanced degree of professional education to survive in the increasingly complex field of election administration. Seemingly overnight election officials were propelled into the public arena amid new expectations, heightened transparency, intensified accountability, creation of state voter databases and new voting systems. All facets of election administration were shifting to meet the mandates resulting from HAVA. The need for election official professionalization and education was no longer an extracurricular goal but a necessity. New requirements placed on election officials demanded a higher degree of skill that resulted in many veteran election officials retiring and a wave of new, younger, inexperienced election officials entering the field. To respond to these changes, Auburn University's Election Administration Initiative created a Graduate Certificate in Election Administration. The Graduate Certificate in Election Administration is a 15-credit-hour program that can be earned within the Auburn University Master of Public Administration (MPA) Program or as a separate certificate. As approved by Auburn, CERA certification qualifies for 3 graduate credit hours toward the graduate certificate.

As the Election Center programs expanded and evolved to meet the needs of the new era of election administrator, the professional education program was expanded to include election vendors. Those companies that served election offices with voting systems and variety of election services

and products were now presented with an opportunity to learn the depth and details of the election administrators' job to better serve their needs and also to attain their professional certification as a Certified Registrations Election Vendor.

I have witnessed throughout my 34 years of training adults that the added value in face-to-face instructor-led training is invaluable for many reasons. Electronic training (E-training) has a place and can be an effective way of delivering a message to a lot of people without the cost and time of travel. However, when you are captive in a room with a group of your peers, you are more focused on the learning and distractions are minimized. For 26 years, since the first professional education classes were offered, it's been stated repeatedly by election officials class after class, year after year, that the opportunity to work together with other election officials from around the country and learn how they do things differently in their states is as valuable an aspect of the professional education program as the course content. The degree of focus resulting from a distraction-free environment (a classroom) creates a robust opportunity for students to be physically and mentally present and to be committed to the outcome of the experience. This sense of presence and focus is taken one step further with the work done in small groups. As one example, a public administration concept, process, or model is introduced to the classroom of students, who then break into small groups with an assignment. Working together in the small groups, they then report their findings back to the larger group, ultimately enhancing their skill base and sharing ideas and best practices which often can be applied in their workplaces. These are just a few of the comments made by students as a result of working in the face-to-face classroom environment:

> "The opportunity to collaborate and learn from election officials from all around the country is invaluable."
>
> "Sharing stories and experiences with these officials has had a tremendous effect on how I run my local elections office."
>
> "The Professional Education Program has taught me that we are in it together no matter the state or county."
>
> "It's a great resource to brainstorm with other election officials throughout the country that normally your paths would not cross."

Face-to-face instruction also offers instructor adaptability in the delivery of course content when, for example, the ratio of less experienced

election officials is higher than the more experienced officials in a particular class.

A classroom environment also provides a safety zone for the election officials among peers who understand what their colleagues experience and this camaraderie encourages the election officials to share within the confines of the group and know that what is said in the classroom stays in the classroom. Building personal relationships with face-to-face instruction is paramount in trust and confidence building and has resulted in election officials not only participating in the course content leading to their certification but also volunteering to be members of task forces, special project steering committees, and other committee opportunities offered by the Election Center and Auburn University that involve a variety of jurisdictions from small, medium, and large election operations. This results in election officials coming away with their own personal network of experts to call upon after the training is complete. Many of the election officials who go through the program form bonds and professional friendships that last for many years after they attain their initial certification.

Over the past three decades, election officials in the United States have had to adapt to an escalating cadre of demands and an ever-increasing level of knowledge required to get from point A (providing the vehicle for registering a person to vote) to point B (providing a safe and accessible voting environment) to point C (canvassing the votes and declaring the winners). Given the intricacies of today's elections and understanding the number of organizations and individuals that election operations impact in some way, success hinges on the election administrator having the knowledge, tools, and resources to implement their duties. Providing a professional education program that adapts and changes to meet the expanding demands of the profession has become an institutional necessity, a vehicle to foster and ensure that success. That success relies in part on professional education continually restructuring and providing opportunities for election administrators to come together, learn public administration concepts and ideologies, and apply those concepts in real time by sharing and learning with and from their peers. As Benjamin Franklin reminds us: *Tell me and I forget. Teach me and I remember. Involve me and I learn.*

CHAPTER 20

The Road to Election Administration Professionalization: Follow the Bottom Line

Doug Chapin

Abstract There is a growing recognition in the field that professionalization of election administration is a vital need for the entire election community. And yet, despite ever-increasing numbers of educational programs and opportunities—not to mention evidence that such programs lead to better outcomes for voters—states have been slow to require professional training for their election officials. One reason may be the lack of a connection between professionalization and states' bottom lines: that is, a linkage between an increase in training and cost-related election outcomes like reducing errors, more effective spending, and increased cost efficiency. Accordingly, the field needs to find a way to gather information on election costs and link it to the presence or absence of professional election administration training. Quite simply, professionalization advocates need to help policymakers "follow the money."

Keywords Election administration • Professionalization • Education and training • State policy • Election costs • Effectiveness • Efficiency

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One of the most encouraging aspects of America's growing focus on the field of election administration has been the recognition that better training and education for election professionals is a vital component of the long-term health of the nation's democracy.

Indeed, the 2014 report of the Presidential Commission on Election Administration included this passage regarding professionalization:

> [T]he Commission found general agreement that election administration is public administration. That means that in every respect possible, the responsible department or agency in every state should have on staff individuals who are chosen and serve solely on the basis of their experience and expertise. The Commission notes that this is often the case in departments across the country, and it is a model to which all jurisdictions should aspire.
>
> Elected officials are well-served having professional support, and it would also bolster the voting public's confidence in the voting process. Professionalism in administration assumes particular importance in a field characterized by scarcity of resources and increased public demand for a high quality of administration with keen political sensitivities.
>
> It is evident to the Commission that the core competencies required of today's election administrator are different from those in the past. The last decade's heightened demand for more professional administration of elections and modernization of the process demonstrates that there is an increasing need for technology acumen, public relations skills, and data savvy.
>
> Indeed, the Commission would go further and urge the integration of election administration in university curriculums of public administration. For the most part, election officials now migrate into their positions from other areas of government or political party service. Once there, certification and training programs run by Secretaries of State, state associations of clerks, or national organizations, such as the Election Center and the [International Association of Government Officials], become the forums for professional development. It is time that election administration is also counted among those fields for which graduate training in a professional school can constitute preparation for a career (Presidential Commission on Election Administration 2014, 18–19).

Fortunately, those existing training programs are supplemented now by masters- and undergraduate-level education at Auburn University[1] and

[1] http://bulletin.auburn.edu/thegraduateschool/graduatedegreesoffered/publicadministrationandpublicpolicympaphd_major/electionadmin_cert/.

the University of Minnesota.[2] The national accrediting body for graduate education in public service, the National Association of Schools of Public Administration and Affairs (NASPAA), has initiated efforts to pool common resources from these programs to make them available for graduate education at other institutional members that focus on public administration, public affairs, and/or public policy.[3] These efforts are reaching an ever-increasing number of students and election officials at every level of experience and in every community.

To be sure, the growing *supply* of educational opportunities is a huge plus for the field, and as such appears to be associated not only with a strong uptick in state training programs but also with overall improvements in both voter participation and the quality of service.[4]

While this *Field of Dreams* approach ("build it, and they will come") is necessary, it is insufficient to ensure long-term professionalization of election administration. Rather, as I'll discuss below, the better approach is to follow the advice of "Deep Throat" in *All the President's Men*: "follow the money."

Many of the challenges facing professionalization—indeed, all of election administration—are tied to scarcity of resources. Despite some injections of federal dollars via the Help America Vote Act[5] and the recent election cybersecurity funds in the FY2019 federal omnibus,[6] states (and more often localities) are left on their own to fund voting technology purchases and other aspects of election administration.

Because of this, current professionalization efforts are driven by availability of resources in specific communities or at different levels of experience in the field. In other words, current spending and investment in professional education and training tends to come from jurisdictions with larger budgets—and thus more disposable funds—or more from senior administrators who view the courses as a capstone for years of experience as opposed to a gateway into, or ladder up, the field.

One key reason for the lack of greater public-sector investment in professional education and training is the absence of any particular financial

[2] https://www.hhh.umn.edu/certificate-programs/certificate-election-administration.

[3] http://www.naspaa.org/students/InternshipSum17_ElectionAdministration.pdf.

[4] https://www.dropbox.com/s/l15bupsuw9k76x7/BrownHaleESRA2017rev072417.pdf?dl=0.

[5] PL 105–272 (2002).

[6] PL 115–141 see also Chapin, http://editions.lib.umn.edu/electionacademy/2018/03/22/omnibus-budget-to-include-380m-for-election-security/.

incentive for governments to fund it—or for administrators to enroll. For the most part, election administration is unlike other disciplines in the public administration field, in which professionals either obtain additional credentials for additional pay/status or are required to do so as a condition of keeping their jobs.[7] Louisiana is an outlier in that it offers a financial incentive for election officials to obtain and maintain professional certification through the national certification program developed and offered by the Election Center in partnership with Auburn University.

Consequently, states and localities and their election officials end up in a "chicken and egg" situation regarding professional training. Governments do not want to fund professional training in election administration unless they can see benefits in the conduct of elections. In addition, election officials do not want to enroll unless they get some kind of benefit for participating.

For this reason, the next step toward widespread professionalization of the field—which I define as nationwide state and/or local training requirements supported by salary and promotion benefits for administrators—is to demonstrate the *fiscal* benefits that accrue in addition to the *civic* benefits of better training and education of election professionals. In the long run, that probably means demonstrating the positive effect of professional education on most if not all of the following: (1) money spent (in aggregate and per voter) on election administration—both overall ("cost of elections") and for individual elections ("costs of an election"); (2) more efficient and cost-effective technology investments, including optimal balance of in-house and outsourced work; (3) decreases in "fix-it" costs like change orders, temporary labor, and the like; and (4) reduction in post-election litigation and other challenges to election outcomes.

By linking these outcomes to increased salaries, promotion, and training for election administration, policymakers can be assured that education and training is adding value to the election process—and is thus worth committing taxpayer dollars to support. While initially this link may only trigger investments by jurisdictions with the funds to cover the costs, over time the growing evidence base—and the decrease in per-student costs as enrollments increase—should attract new communities into the fold.

But in order to make this work, the field needs better data on what it costs to run elections in this country. Election costs are the "white whale" of election administration—incredibly valuable information that would

[7] See, for example, https://coopercenter.org/services/government-training.

help make sense of so many different aspects of the nation's election system, but elusive because of the decentralized nature of the nation's election system. I often joke that the nation has a uniform election system in that everybody does things their own way that is intensified in the costs sphere, where state-, local-, and community-level variation in funding and accounting for election spending result in wildly divergent systems of tracking and reporting.

Fortunately, we are starting to make headway in thinking through—and even collecting!—cost data from election officials nationwide. A recent paper by Mohr, Kropf, Pope, Shepherd, and Esterle (2018) illuminates a new way to categorize and analyze election cost data.

> [W]e discuss the measurement and conceptualization of the costs involved in elections, and the ways that this cost can be operationalized. By this, we mean not just the direct costs of one particular election, but also the costs for personnel, voter registration work, other "between election" costs. Although cost data can come from various sources—including budgets, audited financial statements, and cost accounting—we ultimately focused our research and discussion of election costs on the financial data provided by [annual financial report] expenditures (Mohr et al. 2018, p. 1).

By identifying distinctions between the cost of individual elections and an overall cost of elections, this approach suggests a way to capture the effect of greater professionalization on total costs as well as track it from election to election.

For this reason, I believe it is incumbent upon election officials nationwide—and perhaps more importantly, in their best interest—to cooperate with efforts to improve election cost reporting as the best possible way to bring greater professionalization to the field. By improving cost reporting, we can see what the greatest cost drivers are in elections and make meaningful comparisons between and across jurisdictions. Armed with this information, election organizations and universities can collaborate on designing and fielding courses aimed at improving performance in these high-leverage areas as well as overall. Researchers can assess the influence that training has on election costs. State and local governments can use these data to create financial and job incentives for election officials to take the training. Well-trained professional election officials can further improve output and outcome data. Lather, rinse, repeat.

Obtaining these data can happen in a number of different ways, but the two most promising are for election jurisdictions to (a) be more forthcoming with financial data on elections when solicited by researchers, and (b) adopt and use a standard "chart of accounts" for election spending. This latter approach may grow in popularity as the push to create and implement common data standards gains traction in the election administration field.[8]

In conclusion, then, I believe the way forward for greater professionalization of election administration is to continue to maintain the emphasis on its civic benefits—higher turnout, greater confidence, and so on—while layering on a new focus on fiscal benefits derived from both better cost accounting and an increasingly evidence-based focus on the impact of training on election outcomes other than election returns.

Just as campaigns have discovered the power of personalizing political messages—"here's how this election affects YOU"—so must the election profession (and the academics who love them) make the case to policymakers that better education and training are worth paying for because they not only improve the experience but benefit the bottom line.

Reference

Mohr, Zachary, Martha Kropf, JoEllen Pope, Mary Jo Shepherd, and Madison Esterle. 2018. *Election Administration Spending in Local Election Jurisdictions: Results from a Nationwide Data Collection Project*. Paper presented at the 2018 Election Sciences, Reform and Administration Conference, Madison, Wisconsin, 1–32.

[8] http://editions.lib.umn.edu/electionacademy/2018/03/23/katy-owens-hubler-in-electionlineweekly-on-common-data-format/.

PART III

Tools for the Field

CHAPTER 21

A Voter-Centered, Voter-First Approach to Elections

Amber McReynolds

Abstract Identifying new and innovative approaches to enhance voter experience and process transparency is an important component of election administration. This case presents the professional experience of one election administrator and provides recommendations for election administrators, elected officials, and voters to ensure that our election systems are secure.

Keywords Data visualization • Communication • Voters • Elected officials • Election security

Background—Why Denver Is Denver Today

When I started at the elections office in Denver over 13 years ago, as an energetic and passionate 26-year-old, I was excited for the opportunity to serve. I quickly found a culture that devastated me. I asked questions and tried to learn and found very little to help me. I found very little

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commitment to serving customers, an extraordinary disinterest in continuous improvement, and inefficiency across the board. The motto of the day was 'we have always done things this way and we will continue doing things this way.' I thought that maybe these responses were found only in this office, but I found this same sentiment almost everywhere I went in the election administration industry.

So, after many frustrating first days, I decided that I would learn as much as I could, build systems and processes (that did not exist) for the area that I was responsible for, and, some day, if I had a chance, I would lead change.

The turmoil in management and executive leadership continued. There were leaders in positions that were not qualified or had very little interest in serving the public. It was a difficult, trying, and disappointing place to work. Then, in 2006, as a result of these leadership issues, complete technology failure, and lack of planning, there was a bad election that impacted thousands of voters across the city. My little area for absentee ballots for the most part worked well but we were closed down by the technology failures that I and a few of us had tried to bring attention to before the election.

After that, Denver voters voted to change the governance structure and opted for an elected clerk and recorder instead of the commission that existed before. The first clerk and recorder started to meet with all the staff. At that time, I actually had a job offer to go to the State Elections Office. After all the turmoil at the Denver office, I thought it would be the right decision. Then I met with Clerk O'Malley, who to this day is a mentor and friend to me. I was nervous for my meeting but optimistic to make things better after a painful two years. We had a wonderful meeting and at the end, she said, do you want to be a part of the change here? I didn't hesitate at all and said yes. I was promoted to be a manager and started to make changes within the areas for which I had responsibility. We had new leadership and a sense of urgency. The organization needed to be restructured and we knew that had to happen first. Further, we desperately needed more resources. In the transition, more than half of the previous staff left and we started to hire new staff. After a few months, I applied for the Deputy Director position, but they hired someone that had come in second for the Director job. That was ok for me and I continued to do all that I could to improve the office. Things didn't go well with the Deputy. He was never there and frankly just gave me most of his work including hiring staff. I'll never forget the day, he came to my desk as he was leaving

for a five-day weekend, and handed me a pile of probably 300 pages of resumes and applications that had been in his desk for over a month. He said, we need to hire an Administration Manager and I haven't had time to look at these, can you find someone. I started to look through the applications and found that they were more than two months old so I decided to stay that night and go through them so that I could invite them in for interviews. I read them and marked five to send emails to which I did promptly that night. One was for an applicant named Lisa.

I emailed Lisa and asked her for an interview. She responded quickly and said that she was surprised to receive the email since it had been four months since she applied, which for me flagged another inefficiency in the city's process for hiring! We interviewed Lisa (along with other applicants) and I hired her.

Today, Lisa is part of the senior management team and serving as Administration Deputy Director for the Denver Elections Office. To this day, she is a star, a dedicated public servant, and, behind the scenes, a vibrant part of the culture of the Denver Elections Office. Since that time, we have hired some of the most talented and committed individuals in this industry, many of whom I believe will be stars in the election world but more broadly in public service.

This story demonstrates the change that needed to happen. We had to change and we had to do it quickly, perhaps even too quickly. I never wanted to see voters go through a painful process to vote, wait in line, or experience deficient customer service. We had to create a culture that included values of service, commitment, excellence, and innovation. To attract the best, we had to offer a culture of excellence and be a top election office. So that's what we set out to do.

Denver Elections Today

I had the honor of serving the City and County of Denver, Colorado, as the Director of Elections for 7 years and administrator for over 13 years. Today, Denver is committed to ensuring that its citizens have an outstanding voting experience. The elections team is extraordinarily committed to serving voters and facilitating this fundamental democratic process. During my tenure in local government administration, I learned very quickly that all elections are essential—from presidential elections to local school board elections—and it is important for election officials and local government institutions to support voters throughout the process.

As a dynamic, highly complex, and decentralized ecosystem, the election administration field involves commitment by federal, state, and local election officials but also technologists, stakeholders, advocacy groups, and above all—voters. Let me say that again. Voters are the key and making their experience meaningful, accessible, and secure is the ultimate goal. We as a community must continue to improve our service delivery to voters, respond to their needs, and facilitate a fair and accessible process. I believe this process must be free from partisan politics and must be centered around doing what's right for all voters, regardless of political persuasion.

Thus, to solve critical issues, including ensuring that our election systems are secure, I would offer the following as a call to action.

To election administrators—Support your voters, connect with them, and listen to them. You can do this specifically by collecting and analyzing customer service-related data. The winning formula is as follows: streamline the voting experience + advocate for voter-centric changes = improve internal operations, gain efficiency, and improve service. Election administration is a local phenomenon and it is local election officials who deliver a direct service to voters. Federal and state officials provide support to the local election offices with rules and regulations that provide consistent practice, training, voter registration systems, and other secondary support.

Action steps for election officials:

1. *Develop and cultivate a culture of commitment, excellence, service, creativity, curiosity, innovation, and learning.* A great book that I believe is essential is 'What's Right, not Who's Right' by Robert Tipton[1]
2. *Embrace process improvement strategies and techniques.* Elections are about people and process. Streamlining the process and identifying waste will improve service delivery. Denver offers a training program to other jurisdictions.[2]
3. *Tell the story—collect and analyze data to improve service delivery and enhance the voting experience.* Share and publish your data and your successes. Measurement is key to continuous improvement. Show what you have accomplished, and why it matters. Figure 21.1 shows

[1] Robert Tipton, *What's Right Not Who's Right: A Simple Shift to End the World's Madness* (Denver, CO, Alden-Swain Press, 2018).

[2] www.DenverGov.org/PeakAcademy.

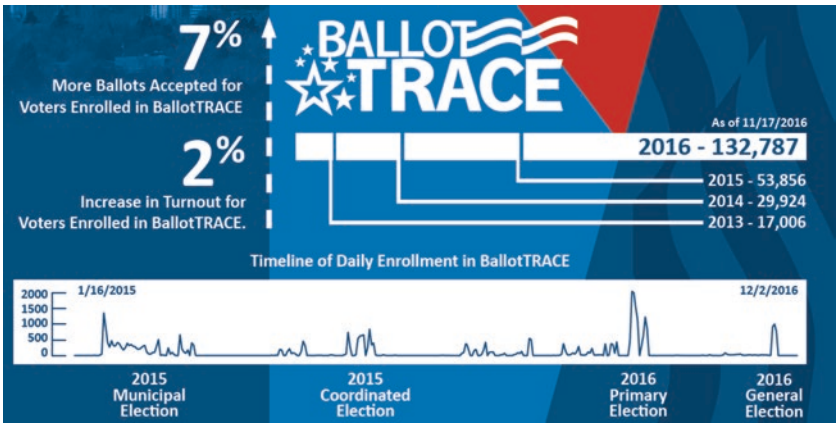

Fig. 21.1 Example of visualized data that summarizes the impact of process improvement at Denver Elections

some examples of the visual displays of data that we have used in the Denver office that summarize the impact of process improvement.[3]

4. *Continue to improve.* Conduct post-election debriefs and look for opportunities to improve. This step is extremely important to review and celebrate success while identifying opportunities for the future.

To elected officials—Listen to your local election administrators, respect voters, and give voters a chance. Once your election is over, you represent all voters, not just those who cast a vote for you or donated to your campaign. Regardless of your party affiliation, you should advocate for fair, accessible, secure, transparent, and efficient election processes. Barriers and burdens in the election process such as restrictive voter registration deadlines, overly prescriptive residency requirements, and lack of options to vote outside of a specific time are not productive for voters and not at all efficient in terms of the procurement and funding of voting systems, and thus are woefully unfair to taxpayers.

Colorado modernized its voting model in 2013 (HB13-1303[4]) and now is a leading state in terms of policy innovation, election administration,

[3] From Denver Elections 2016 Summary Report Available at www.DenverVotes.org.

[4] Colorado House Bill 13-1303 Final Bill: http://www.colorado.gov/clics/clics2013a/commsumm.nsf/b4a3962433b52fa787256e5f00670a71/8cecafdefa56797987257b57007cbb54?OpenDocument.

and civic engagement. At that time, there was opposition by some, but our coalition of election officials, many of the county clerks, and advocacy groups was able to advocate for and pass the most comprehensive election reform package in Colorado's history. Now, there is documented evidence[5] of the positive impact this reform has had to improve the voting experience, increase civic engagement, reduce costs, and above all—more effectively serve voters.[6]

To voters—Tell us what you want and set high expectations. You deserve a voting process that is efficient, accessible, secure, and reliable—one that respects you and your right to vote and to participate.

The Denver Elections Office listens to voters by analyzing the customer service data and then builds systems that provide the information proactively; as an example, Ballot TRACE was created as a result of voter calls (Fig. 21.2).[7] Ballot TRACE is a first-in-the-nation Ballot Tracking Reporting and Communications Engine. It provides visibility and accountability for ballots that are mailed out to voters either automatically or by request. Ballot TRACE is an effective communication tool that provides customer service information to voters. Further, it is important to put voters' needs at the center of the decision-making process by analyzing data and metrics, utilizing creative design thinking, and continuing to look for opportunities to improve.[8]

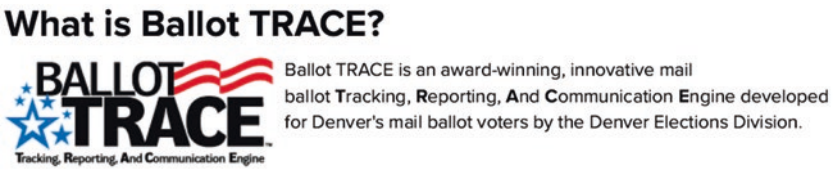

Fig. 21.2 Ballot TRACE

[5] https://www.nonprofitvote.org/documents/2017/03/america-goes-polls-2016.pdf/.

[6] https://www.pewtrusts.org/~/media/assets/2016/03/coloradovotingreformsearlyresults.pdf.

[7] https://www.denvergov.org/pocketgov/#/ballot/lookup.

[8] Visit www.DenverVotes.org for data visualizations and historical analysis.

Conclusion

Election administration starts at the local level but is extremely complex and requires coordination with state and federal entities, especially with regard to security. Ensuring that our elections are fair, accurate, accessible, secure, and transparent requires commitment, collaboration, coordination, and communication across all levels of government. And it should be free from partisan politics, with a focus on who votes not who wins, and it is my sincere hope that a solution-orientated approach is the ultimate path forward. As election officials, we must do what's right for voters to make their experience meaningful. By focusing our election administration processes and problem-solving efforts on the voter, from start to finish in all our processes, we can develop solutions that accomplish that goal.

CHAPTER 22

Implementing Wait Time Innovation in Election Administration: The Case of the EVWait Times App

Tim Tsujii

Abstract This case study looks into the evolution of a web-based tool for tracking wait times during an election. Drawing inspiration from the wait time tracking system at Walt Disney World, the Forsyth County Board of Elections implemented a wait time tracking application, called EVWait Times, for early voting in the 2016 general election. Using an ESRI (ArcGIS software platform) tool, the free web app provided (1) hours and location of early voting sites, (2) the wait times at the early voting sites, (3) information on finding the closest voting site, and (4) driving directions to the sites, which were all posted on a map display on the Forsyth County Board of Elections website. While the wait time tracking tool is primarily intended for quickly disseminating wait time information to voters, the secondary benefit is to use the information that was collected during this time to analyze the early voting traffic and determine which sites received more early voters than others. This information will allow our staff to make any improvements for future elections to better manage the voter turnout at the early voting sites.

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Keywords Wait times • Long lines • Technology • Automation • Web app and early voting

My professional career in election administration began in 2005 as the Early Voting Director for the Guilford County (NC) Board of Elections; I was later promoted to Deputy Director of Elections. In 2016, I was appointed as the Director of Elections to the Forsyth County Board of Elections. Forsyth County (Winston-Salem) is North Carolina's 4th largest county, with 101 precincts and serving approximately 250,000 registered voters. I've spent 14 years in elections and I've loved every minute of it—no two elections are alike. It is a thrill for me to serve the voters of my county.

We have a slogan in our office, "Voter Service > Customer Service." As part of that mantra we are always looking for technological improvements so that we can provide greater voter service. Automation is an integral part that can make the elections process more effective and efficient. The combination of technology and human processes is a melding of two pieces that can make the process work better and also helps eliminate human error. The early voting wait time tracking application, or EVWait Times, is an illustration of how that combination can work in a local election office.

Early Voting Wait Time Tracking App

I drew inspiration for the wait time tracking app from a family trip to Walt Disney World back in 2014. They have wait time monitors at the entrances to every attraction and you can also track the wait times on the Disney World app through any mobile device. I recall as we entered the queue for the Snow White and the Seven Dwarfs Mine Train ride, a Disney cast member handed me a red RF-activated (radio frequency) card to hold on to in the queue. When each guest gets through the line to the turnstile, they hand this card back to the Disney cast member who then scans the card to calculate the wait time for that guest and updates the monitors and the Disney World app. The cast members repeat this process throughout the day as guests go through the lines of the various attractions at the theme park.

As I was standing in line I started thinking about the card and wondered how we could apply this concept to election lines and the wait times at polling places. Previously, we would have to take a slip of paper, write

the start time on it, hand it to the voter in the back of the line, instruct them to give the slip of paper to the poll worker at the registration table, record the end time, and call it in to the elections office. I wanted to find a way to track and disseminate the wait times in a more efficient manner that was paperless, digital, automated, calculator-free, and simple, just like the model used in Disney World.

When I returned home, I began researching tools that already existed and I found a mobile timesheet app that applied the same principles as the Disney tool. It was free, and so I downloaded it onto iPads and we created red cards similar to what they hand out at Disney World, and piloted it. The pilot went well, but we decided there were ways to improve on the process.

In Forsyth County, the 2016 general election was projected to have high-volume voter turnout for early voting. The Forsyth County Board of Elections wanted to be able to provide information to the public in regard to early voting sites along with wait times. In collaboration with the county information technology department and geographic information office, we developed the EVWait Times application using an ESRI (ArcGIS software platform) web-based tool to provide the following information: (1) hours and location of early voting sites, (2) the wait times at the early voting sites, (3) the closest voting site, and (4) driving directions to the sites.

One reason the EVWait Times application works so well is because of its simplicity. Poll workers hand out a lanyard with an instruction card (Fig. 22.1) to the voter at the end of the line. Then the poll workers press a Start/Stop button on a tablet device. The voter returns the lanyard to a poll worker when they arrive at a registration table and the Start/Stop button is pressed to stop the timer. The process is repeated continuously throughout the day to update the wait times. This Start/Stop (Figs. 22.2 and 22.3) website is linked to an SQL server. The times captured in the SQL server database are linked directly to the EVWait Times via a Web View; so as times are updated the application is also updated in real time.

Figure 22.4 is a screenshot from EVWait Times. The map shows the locations of the early voting sites along with the wait time. The wait time is represented by graduated circles using a gradient color scheme. This allows individuals using the application to quickly identify locations with shorter wait times (small green circles) versus the longer wait times (larger red circles).

Fig. 22.1 Lanyard with instructions

Fig. 22.2 Start button

Fig. 22.3 Stop button

Once an individual finds a site he/she might be interested in they can tap on the circle and an information window opens (Fig. 22.5), giving them more information about the voting site such as hours of operations, address, and the exact wait time.

EVWait also provides individuals a way to get driving directions to the voting site they have chosen (Fig. 22.6). The driving directions are step-by-step directions with an estimated arrival time, similar to Google Maps.

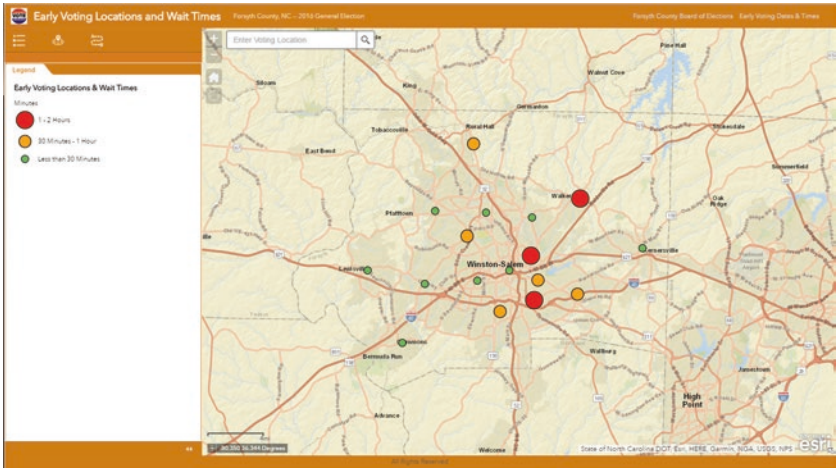

Fig. 22.4 Screenshot of EVWait Times

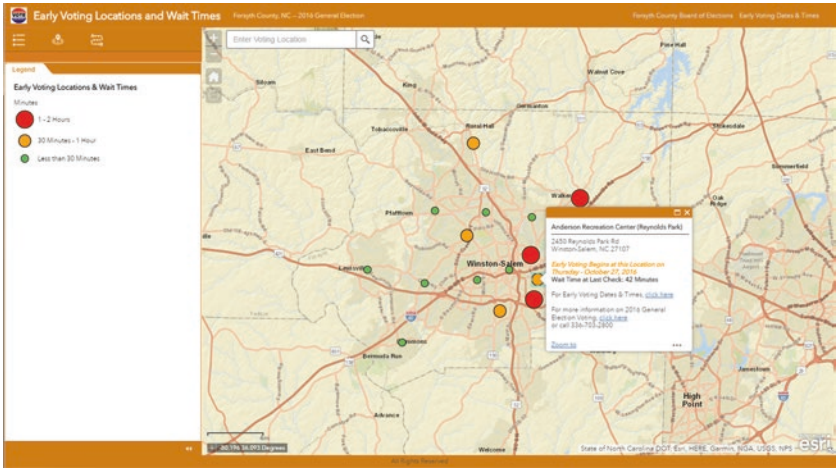

Fig. 22.5 Screenshot of EVWait Times with information pop-up

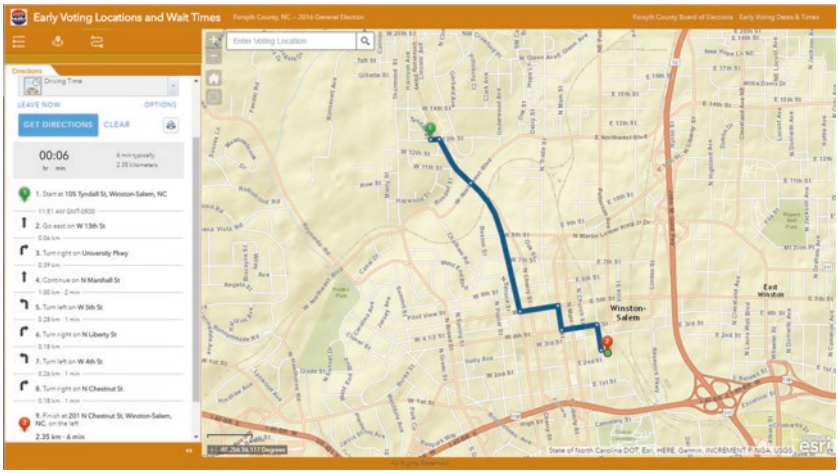

Fig. 22.6 Screenshot of EVWait driving directions

Another feature built into the EVWait Times is the ability to locate voting sites near your location (Fig. 22.7). An individual can either input their address or use the *Locate Me* button. Once the individual is located, the application drops a pin and displays a radius of 5 miles, returning a list of all early polling sites within the 5-mile radius. The users can adjust the radius distance manually using the slider bar.

The Early Voting Wait Time Application (EVWait Times) was used during the early voting period of October 20, 2016, through November 5, 2016. Citizens, poll workers, and elected officials used the application for information purpose about wait times and polling locations. The application had a daily average of 3908 views per day with 62,530 views during the entire early voting period (Fig. 22.8), which is approximately 59% of the 105,334 total voters that cast their ballot during early voting. Figure 22.9 provides a snapshot of the daily average and total views during the 2018 general election.

In each iteration of the app we experienced limitations in WiFi connectivity. In 2016, there were several sites where the voting line extended beyond the voting enclosure. We were using mobile hotspots at those locations and the line manager had to take the iPad outside of the WiFi boundaries. We had to devise a plan during early voting to establish the

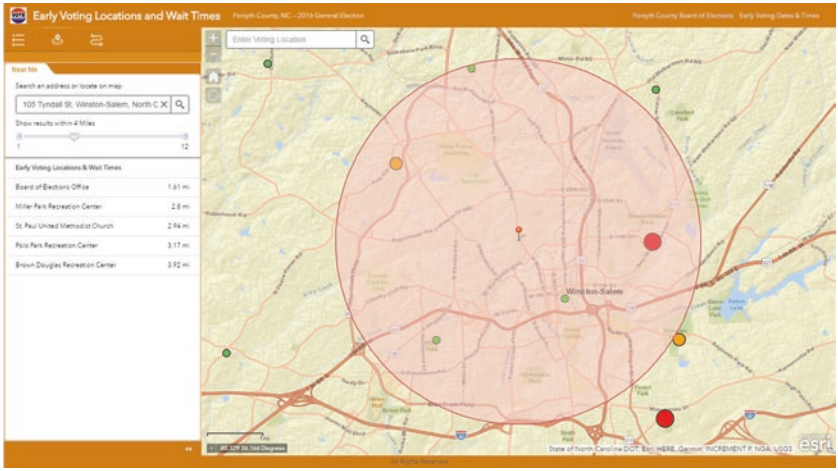

Fig. 22.7 Screenshot of EVWait Times locate nearest location feature

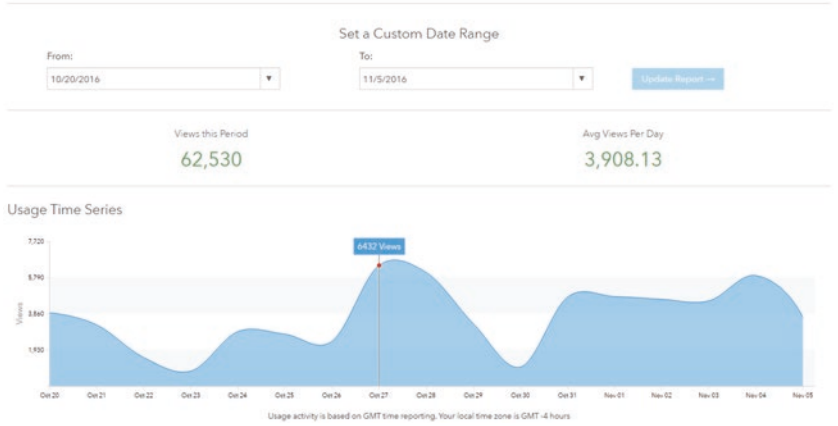

Fig. 22.8 AGOL screenshot of EVWait Times number of users during 10/20/2016-11/05/2016

boundaries so that connectivity was constant. Poll workers were using the iPads for both line management and voter lookup to expedite any paperwork before the voters arrived at the registration table. Their off-the-cuff plan was to know where the boundary was and then position themselves in that spot so they could connect with the voter at that point.

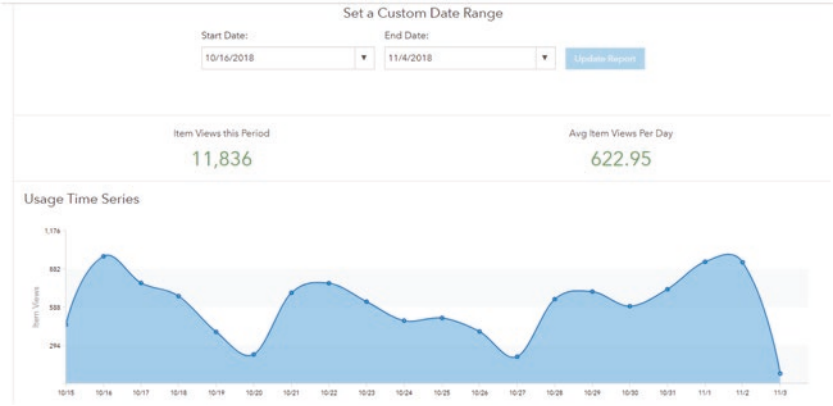

Fig. 22.9 AGOL screenshot of EVWait Times number of users during 10/16/2018-11/3/2018

With the wait time app, they pushed the button inside the WiFi area and then took the card to where the voter was outside the line. We learned a great lesson about WiFi capability and improved on that.

The second challenge that we encountered was that some poll workers forgot to stop the stopwatch at the end of the day to reset the wait time on the website so it would show "less than 5 minutes." This meant that if a voter checked the wait time first thing in the morning, it would reflect the last wait time from the night before. The data uploaded into the database would be incorrect, which meant that we had to manually refresh the wait times. We also encountered challenges with resetting the wait times during the slow periods of each day. Through improved training we were able to resolve this for our last election.

The great thing about our tool is that it can be easily replicated. Several jurisdictions outside North Carolina have contacted me for the code and instructions to set it up for use in their jurisdictions. One jurisdiction in Colorado ran a pilot alongside us with our first iteration, and they found that it did not serve the wait time purposes for their county. However, it did provide information that helped them track poll worker hours in their county as they didn't have a mechanism to track poll worker hours during their early voting. Not only can it be easily replicated for free but the only cost would be for any WiFi-enabled devices, the cost of printing the cards, and the license for the ESRI tool.

Ultimately, our goal was to find a way to quickly disseminate the wait time information to voters. The secondary benefit is to use the information that was collected during this time to analyze the early voting traffic and determine which sites received more early voters than others. This information will allow our staff to make any improvements for future elections to better manage the voter turnout at the early voting sites. Feedback from poll workers, voters, and the media has been very positive. Numerous news stories appeared in local and regional print and TV media that highlighted the app and its development.

Other Technology Developments

We are currently looking into virtual reality, or augmented reality, poll worker training. We are taking the concept of the Pokeman-Go augmented reality application and applying it to poll worker training. We believe that hands-on training is the best way to teach adults, but we cannot always do this. A tool like this will give us a readily available training tool that can be accessed on our website. A poll worker can click on the tool and see the voting machine and receive instructions about how to set it up, how to open and close the polls, how to sign in a voter, and so on. They can do this hands-on in a virtual polling place setting. I've purchased virtual reality glasses and we are testing different ways to use this. We hope to get this off the ground for use in the 2020 presidential elections.

There are always constant changes and new advances in technology. We are trying to keep up with this to benefit poll workers and voters for our county. We are also embracing them. These new apps have reinforced our belief in what technology can offer our election office and by extension our voters.

CHAPTER 23

Election Security and Large Counties

Noah Praetz

Abstract State election officials do a tremendous service overseeing and regulating elections in America. But when it comes to defending against cyber threats the work falls to the local election officials—over 8000 nationwide—who mostly control, secure, and run elections. They are on the front lines of this new battlefield. And they are the entities most in need of support and attention from state and federal, public and private partners.

Keywords Elections • Security • Cybersecurity • Local election official • Support

Introduction

From my office window I can see The Picasso, a large iron structure, thought to be a woman, by the named sculptor. I would often contemplate problems while watching children and skateboarders play on this centerpiece of Chicago's Daley Plaza. This was the case in June of 2016 when I noticed several emails pop in succession from staff announcing that

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Illinois' statewide voter database was inaccessible. No big deal—it's just maintenance—I thought then. Seemingly, it was an inconsequential occurrence in our state because in Illinois each local election authority has its own voter registration system that shares data "up" to the statewide database. Nearly a month later it was clear that our statewide system had been breached by hackers. Two years later it's been attributed to several Russians working for the Internet Research Agency at the direction of the Kremlin.

Little did I know then that I was a witness to history—at the bleeding edge of an inflection point in the field of election administration. Over the past two years state and local election officials have undergone a tremendous forced maturation process and now the cybersecurity of election systems is the top issue in our field.

And yet, we have significant gaps. Elections are run locally, by county and city bureaucrats dedicated to a free and fair count. They are greatly outmatched against a persistent foreign threat—and the full strength of state and federal resources has yet to reach them. The challenge then, as local election officials, is to quickly understand the fundamental requirements of election security in this era and to pull ourselves up by the bootstraps to meet them.

Elections are the fundamental institution in our country. And, with effort and support, elections will remain strong and resilient, as impervious to external forces as The Picasso outside my window.

Summary

Election officials have been securing our nation's votes and voter records for a very long time. They have been securing digital infrastructure for decades. But the changed environment and the expectation of continued sophisticated attacks force them to up their game.

Spurred by the need to defend against foreign enemies, federal and state officials have been working successfully to find a good balance of federal involvement in elections, without trampling on authority that the states zealously guard. Good progress is being made.

State election officials, who protect statewide voter lists everywhere and more systems in some states, and who are often the spokespersons defending our institution, deserve great credit. They provided lead blocking for their locals in the run-up to 2016. And then they provided leadership leading into 2018, first by universally accepting the premise that we are a

target and we are vulnerable, and then by increasingly focusing on supporting locals where most of the risks lie. The Cybersecurity and Infrastructure Security Agency (CISA) charged with providing direct support in this area has also successfully met the continuing demand for information and for services. And the vendors, each of whom are deeply embedded strategic partners to locals, seem to understand the need to be their absolute best.

However, by and large, local election officials are the ones who control, secure, and run elections. Locals—108 offices in Illinois and over 8000 nationwide—are on the front lines of this new battlefield. They control almost the entire election infrastructure. And they are the entities most in need of support and attention. They need help to fortify themselves against the high-probability threat actors they've been warned about.

In Cook County, we studied and undertook significant efforts at securing the infrastructure and helping raise awareness within the ecosystem. We concluded that to decrease the likelihood of successful attack on digital services, each election official must have access to an election infrastructure security officer. Most locals don't have that capacity today.

Local election officials cannot master this problem without direct support of skilled experts. We suggested this be handled by a brigade of digital defenders, or what the United States Department of Homeland Security's (DHS) Government Coordinating Council (GCC) called "cyber navigators," supporting local election officials into the future.

These "navigators" should adopt the mantra of Defend, Detect, Recover. They need to accomplish these three vital goals. They can help *improve defenses* within election offices, following the specific recommendations of the Center for Internet Security or Defending Digital Democracy—we believe they can quickly bring up the floor of the elections security ecosystem. They'll also *establish breach detection techniques*. And they'll *develop recovery plans* for when attackers penetrate the first and second line.

To accomplish this, the "navigators" will secure free support offered by public and private organizations, like DHS, state governments, and companies like Google, Microsoft, and Cloudflare. They will also work with outside vendors who provide much of the election system infrastructure and support to local officials. Not least, they will build a culture of security that can adapt to evolving threats through training and constant reassessment.

And though election officials appreciate that there was no known successful attack against our infrastructure in 2018, the entire community

remains committed to the security effort because the absence of a successful attack happens to be more a function of our adversaries not engaging than a function of our significant efforts over the last two years.

Voters should feel confident that election officials have resilient systems, with paper ballots and good audits almost everywhere. But voters should also understand that, without continued investment in people and products, the possibility of a successful attack increases as does the likelihood that campaigns may cultivate cynicism about the integrity of our elections for their own purposes. Democracy is not perfect. As Churchill said, "It is the worst form of government except for all the others." We need to protect it. We will regret it if our democracy is damaged because we looked away at a critical moment.

Election Security Post 2016

When election administrators certify results, they are an essential part of the process that bestows not just power, but legitimacy. And that legitimacy arises because of the essential American belief that our elections reflect a trusted and true accounting of each election. We protect the legitimacy of elections by protecting two virtues, truth and trust, along two fronts, infrastructure and information. By and large, truth can be protected with policies and tools that can ensure a fair and accurate count. We protect trust by continuing to deliver election services as expected by our voters.

Since 2000 the Cook County Election Division has tried to lead on technology and security—using applied forensics in elections, creating widely circulated cybersecurity checklists in advance of the 2016 elections, and publishing the first White Paper written by election officials in the wake of the 2016 attacks. In 2017 Cook County helped the Center for Internet Security (CIS) adapt their digital security expertise to the unique context of elections and spent some time talking to the Defending Digital Democracy (DDD) program at Harvard's Belfer Center for Science and International Affairs. I was chosen as co-chair of the Government Coordinating Council that the Department of Homeland Security created to help address election security. In that effort we worked with federal, state, and local leaders in elections, technology, intelligence, and law enforcement.

There are two truths that need to dominate the narrative:

- The threats to election infrastructure are real.
- Elections are largely run and secured locally, so security efforts and investments need to be concentrated locally; but those efforts need to be supported by the federal government and led by the states.

As election officials, we had to accept the conclusion of the intelligence community—our elections were attacked. And while enemy efforts using social media, news, and influence systems were more successful in 2016 than those directed at election infrastructure, we expect the attacks will evolve. It is important to recognize that attacks in the information sphere are important and do affect trust in the institution, and election officials have little control in that space. Instead, election administrators must defend their section of the line where they have almost complete control—by securing all elements of our voting infrastructure.

Cybersecurity—One More Sword to Juggle

Prior to 2000, election administrators served mostly as wedding planners, making sure the right list of people came together in the right place with the right stuff. After *Bush v. Gore*, the 2002 Help America Vote Act (HAVA) heralded in a new era of voting technology, and we became legal compliance and IT managers. We've been working to protect an expanding digital technology footprint since then. But the 2016 election showed irrefutably that sophisticated attacks are to be expected and that we must also be cybersecurity managers.

Foreign governments, foreign non-state actors, and domestic troublemakers have the capacity and desire to corrode the essential public belief that our election outcomes are true and reliable. To very different degrees, this threat applies to both preliminary results announced on election night and official, final results. Beyond corrupting election results, the threat also reaches the large variety of systems used to run seamless elections.

Therefore, the new security mantra, or security framework, for local election officials must be "defend, detect, recover."

Security isn't just about defense. Perfect defense is difficult or even impossible. Our best resourced companies like Uber, Equifax, HBO, and Sony and government entities like the Federal Office of Personnel Management and the Illinois State Board of Elections have been breached despite significant defensive investments. Instead, the challenge of security

is to ensure that no successful attack exceeds our resilience—our ability to detect and recover, whether that requires restoring lost data or even recounting ballots—to establish election results that are trusted and true.

Because state laws vary, local election officials confront a different security matrix in each state, which affects their ability to defend, detect, and/or recover. States with great audit processes (detection) and paper ballots (recovery) are much more resilient by definition; and the burden of defending their voting system perfectly is consequently much lower. On the other hand, states without great audits and without paper ballots place the unenviable burden of perfect defense on their local election administrators.

In 2017, Cook County Clerk David Orr and I published a White Paper called "2020 Vision: Election Security in the Age of Committed Foreign Threats." We published it to help guide policy makers and election officials in their actions post 2016. Our key recommendations are included at the end of the chapter.

Elections Are Secured Locally

State election officials deserve respect for their responsibilities and efforts. They are often the mouthpiece of our institution and responsible for managing the regulatory framework. For the past 16 years, many have also managed their state's voter registration systems. In some states they take a far more active role in protecting other parts of the infrastructure. And in 2016, states rather than local jurisdictions were the named targets. But let there be no mistake—local election officials are on the front lines of this new battle field. So, by and large, local election offices secure the nation's election infrastructure. Locals install, store, monitor, test, deploy, run, and audit the voting machines and software. Locals install, store, monitor, test, deploy, run, and audit the electronic pollbooks. It is locals who manage warehouses, informational websites, voter databases, polling places, GIS systems, results reporting systems, military voting systems, command centers, and the myriad digital services we rely upon in modern American elections. It is a local job to defend these systems, to institute controls that would detect breach, and to deploy mitigation strategies that can guarantee election processes and results that are trusted and true. It is their job to ensure recovery.

Most are county officers, and are facing down powerful, shadowy adversaries, much like Andy of Mayberry sent to repel an invading army. They need advice, support, and resources—first, for better technology and

routine hand-counted audits which can give additional confidence that digital results are accurate. Second, and most critically, there is a pressing need for top-notch personnel with the skills to navigate the current cyber battlefield. Our country's local election officials need direct human support as they work to defend the institution against the onslaught of digital threats they've been warned about.

Cook County Efforts

Since the summer of 2016, in Cook County we stepped up our efforts to protect ourselves and to protect the broader ecosystem.

We introduced additional hand-counted audits to our state-mandated 5 percent machine retabulation. And we pushed state legislation to add additional audits to election results—in the form of risk limiting audits.

We did a comprehensive mapping of all our systems and conducted a point and line analysis of potential vulnerabilities. We documented all defensive measures employed and created a list of those we hoped to employ going forward. We also documented all methods of detecting breach, as well as those we hoped to employ in the future. Finally, we developed our recovery plans for any breach at any point on any system. And in 2018 and 2019 the office will practice every recovery method.

We procured new election equipment that will be easier to defend and will make detection and recovery significantly easier.

We introduced state legislation to help local election officials bring in more expertise and cyber monitoring capability.

We worked to create a communication structure in Illinois with federal, state, and local cyber experts, technology experts, law enforcement officials, and election officials.

We teamed with our neighbors at the Chicago Board of Elections to hire an election infrastructure and information security officer.

We worked with MS-ISAC (the Multi-State Information Sharing and Analysis Center) to get rapid intelligence on vulnerabilities and specific threat information to our networks. And we have pushed our colleagues around the state to join it and the elections ISAC. Additionally, we have gotten threat briefings from the Department of Homeland Security (DHS) and the Federal Bureau of Investigation (FBI).

We worked with DHS to conduct cyber scans of our websites and to run a full risk and vulnerability assessment. And let me say that I am glad the folks working for Homeland Security are on our team. I firmly believe if every election official, state or local, undertook a similar effort, there

would be a deafening roar from my colleagues for more resources to procure modern technology and more talented people to institute modern controls.

We worked with the folks at DEF CON® on some of their activities related to training election officials on the defense of networks. DEF CON®, held annually in Las Vegas, Nevada, is one of the world's largest hacker conventions. Primary attendees include computer security professionals, security researchers, and other hackers with a general interest in security. Government employees, corporate professionals, and journalists are often in attendance

I co-chaired the newly created Government Coordinating Council set up with DHS to help drive federal policy and resource allocation. On the GCC, I sit alongside the Chairman of the Election Assistance Commission (EAC), the President of the National Association of Secretaries of State (NASS), the President of the National Association of State Election Directors (NASED), and from the DHS Deputy Assistant Secretary, Infrastructure Protection, National Protection and Programs Directorate (NPPD). As one of nine designated representatives of local election officials, I tried to continually push for the advancement of the concerns of local officials.

And in all these efforts we have learned that coordinating efforts is critical to our individual and ecosystem success.

Coordinated Efforts

There has been a tremendous amount of attention on the states, and their relationship to the federal government and it's been good to see that relationship mending and great information starting to be shared between the two groups. On the GCC we worked hard to refine a plan for securing our sector as well as protocols for sharing information throughout the ecosystem. We worked with the private sector vendor community to ensure we had a common approach to protecting the sector.

DHS now knows how to communicate with the state-level election professionals and vice versa. What remains unfulfilled is the assurance that the information can get all the way down to the local level and that the locals are prepared to digest the information and take necessary action.

It is time to ensure that the successful effort to normalize relations with state officials be duplicated with local election officials. Like an iceberg, the mass, and indeed most of the risks to the nation's election infrastruc-

ture, lies below the surface. And its security lies in the hands of women and men who run elections at the local level.

Given our federalist system, the path for successfully fortifying local election officials is through state government and state election officials. But it's important that they envision their job as helping ensure locals are resourced appropriately and meeting important security metrics. I have no doubt that our state officials are up for the challenge and I look forward to assisting our industry mature in this direction quickly.

Increased Stable Investment and Short-Term Spending

Locals look to state and federal funders and regulators to fortify them on this battlefield. Given the costs of regular technology refreshes and support for human resources with cyber capacity, the needed investment is very large, perhaps on the order of HAVA 2.0.[1] And state and local election officials need a signal that they can invest now for security and not have to squirrel away recent money for some future episode.

Nevertheless, the 2018 investment was greatly appreciated. Congress released $380 million to combat the election cybersecurity threat. And that is an important start. It may be necessary to invest that much annually. Meanwhile, Americans justifiably concerned about the costs need confidence that this money will be spent well.

In my mind there are two top priorities. First, a handful of states and counties still have paperless voting systems. These must be replaced as soon as possible. Second, everywhere, we must improve the security capacities of local election offices. Most are run by just a handful of incredibly dedicated and hardworking heroes. But a handful of people making critical security decisions are outmatched against the threats we've been warned about.

In 2018 in a Chicago newspaper former Cook County Clerk David Orr and I called for a brigade of digital defenders to be deployed to serve election offices around Illinois and the nation, working through the 2020 presidential election and beyond. Later that year, the GCC, comprising the leadership of America's election organizations, suggested a similar construct, suggesting that states employ "cyber navigators" to help fortify local election officials.

[1] HAVA 2.0 refers to the Consolidated Appropriations Act of 2018 which included $380 million in grants, made available to states to improve the administration of elections for federal office, including to enhance technology and make certain election security improvements. The grants are often referred to as HAVA 2.0 or the 2018 HAVA Election Security Fund.

Illinois Approach

The Illinois approach illustrates the value of collaboration and how time-intensive this process will be. In Illinois we formulated a loose security group consisting of representatives of DHS, FBI, the Illinois State Police and their Cyber Team, Illinois Information Security Office, the leadership of the local election official associations, and the State Board of Elections. Originally some local officials and the State Board of Elections had desired to pass through the HAVA funds to the local election officials based largely upon voting age population. But as our group and state legislators digested the cybersecurity problem, we recognized that such a distribution would not be effective enough in fortifying most of the locals. First, regardless of the number of voters served, all 108 election officials had nearly identical cyber footprints, in that they had the same number of networked-attached digitally exposed systems, websites, voting systems, e-pollbooks, command centers, voter registration systems, and so on. Second, the larger offices already had some capacity to tackle this problem—whereas the smaller offices were squeezed so tightly they could barely comply with the current requirements, let alone secure the entire elections threat surface area.

After the GCC issued guidance suggesting "cyber navigators," the state legislature mandated that at least one-half of the 2018 HAVA funds just released be expended on a "cyber navigator" program to be administered by the State Board of Elections. The State Board is getting help fulfilling this mandate from other organizations with cyber expertise. By and large, local election officials supported the bill. And our State Board is eminently capable of fulfilling the mandate.

These "navigators" need to accomplish three vital goals. First, they should work to institute the election security framework—defend, detect, recover. They can help improve defenses within election offices, following the specific recommendations of CIS. They'll quickly bring up the floor of the election security ecosystem. Appropriately supported, we can see massive improvement very quickly. There is low-hanging fruit, but even low-hanging fruit needs to be plucked. They'll also work to support locals' efforts at instituting detection techniques and recovery plans. Second, the "navigators" will do the work necessary to secure the free support being offered by public and private organizations, like DHS, state resources, Microsoft, Google, and Cloudflare, or the Elections Infrastructure Information Sharing & Analysis Center (EI-ISAC); they will also work with the outside vendors who provide much of the election infrastructure

and support to local officials. More importantly, they will help build a culture of security that adapts to the evolving threats we face through training and constant assessment efforts. Illinois' 108 local election offices will mature quickly with this reinforcement. As specific mitigations and upgrades are identified by navigators, the State Board should be positioned to quickly provide that investment.

The State Board of Elections will take some portion of the remainder of the HAVA funds to support their own infrastructure, naturally, since they manage and maintain the statewide voter database. Some portion of the remainder is and will be distributed to the local election officials to invest as they see fit, subject to the guidelines. The state legislature sought to compel participation in the navigator program by making receipt of future grants contingent upon local official participation.

In Illinois, we recognized that this is inherently a local problem. But we also recognize that locals cannot solve this problem themselves. This coordinated, managed approach assures appropriate assessment and remediation efforts can be efficiently implemented. Officials are utilizing existing expertise from other areas of federal, state, and local government as force multipliers.

This massive reinforcement effort can be accomplished nationwide. And it can be done now. It will require the states to cut through the red tape that can delay action. This may mean relying on existing contracts, or even emergency procurements. But states should do whatever they need to do to get the army of "navigators" on the ground as quickly as possible. After all, the danger is not hypothetical. Election officials are bracing against the renewed attacks they've been told to expect.

Supporting a Resilient Public

One job of an election administrator is to conduct elections properly so that losing candidates accept the fact that they lost fairly. Anything that hinders their ability to do that decreases confidence in the system, and undermines their ability to bestow legitimacy—not just victory.

Election officials deploy a variety of networked connected digital services, such as voter registration systems, and unofficial election results displays. Each of these is a ripe target for our adversaries. A successful attack against those services may not change a single vote, but could still damage public confidence. This is particularly true in a time of great public suspicion, exacerbated by a disappointing proliferation of gracelessness and grandstanding.

Our public confidence is already weaker than it should be. Vacillating voting rights rules, no matter how marginal the effect, are disconcerting to many people, naturally suspect given our history. Additionally, some media, activist groups, and politicians have acted in ways that ultimately prey on Americans' insecurities about their most cherished institution, either through wildly outlandish claims of fraud or through claims of suppression that are sometimes exaggerated. Such actions do hinder election officials' ability to bestow not just victory, but legitimacy. We must be very careful to calculate not just the relative effects on power that election rule changes can have, but also the relative effects on legitimacy. Or put another way—will losers be more or less likely to accept that they lost fairly.

Some losing candidates are already apt to call their defeats into doubt. A new digital breach—no matter how far removed from the vote counting system—could turn sore losers to cynicism, disbelief, even revolt. That's the reaction the enemies of the United States want.

In fact, in the face of direct targeting of a state or local election office it is very possible that there will be some service disruptions—most likely to the network connected digital services like election results websites.

The bottom line is we can't eliminate every chance of breach, but we can make sure that successful attacks are rare. And we can provide assurances that we are prepared to recover quickly when they happen. We can do this with support at the local level.

As Americans, we get to choose how we want to respond to potential disruptions. The damage of a foreign attack on our elections infrastructure will be greatly diminished if the targeted institution is also being supported internally with respect.

Exhibit 1: Specific Suggestions from Cook County White Paper—December 2017

Responsibilities of Policymakers and Funders

Defend
Increase the defensive capacity of local and state election officials by:

1. Supporting a digital network for all local election officials that will *facilitate rapid sharing of threats and incidents*, as well as *supporting increased training and resiliency*;

2. *Financing an Election Infrastructure and Information Security Officer (EIISO)* (or consultant) servicing every local and state election official in the country;
3. *Ensuring that threat and incident information known to Government is shared* appropriately throughout the election ecosystem.

Detect
Increase the catastrophic breach detection capacity by *incentivizing*:

1. The use of *modern public audits* of all elections;
2. The use *of modern voting technology* that captures a digital image of each ballot that can be tied to the original ballot and the cast ballot record;
3. The use of *monitoring sensors on the networks of all* willing election officials.

Recover
Eliminate even the most remote possibility of an undetectable catastrophic breach by *replacing all paperless voting systems* that currently serve nearly 20 percent of the country.

Release election officials from their burden of being perfect every single time!

Potential Approach for Election Officials and Their Election Infrastructure and Information Security Officer:

Defend

- *Get experts* into the office. Engage outside cybersecurity resources and professionals. No election offices can handle this problem on their own. Inside most elections offices, there simply is not the complete capacity to accept the threat, assess the vulnerability, digest recommendations, manage mitigations, and perfect recovery.
  - Utilize as many free local, state, and federal (DHS, CIS, and MS-ISAC) tools as possible,
    If government resources are unavailable, or underwhelming, hire private firms or partner with academic institutions.
  - Collaborate with the local, state, and federal government because we are not alone in facing this type of threat include the fusion centers.

  - Bring in outside resources to partner with information technology and information security teams, with a focus solely on election security.

    The reality is that most election officials share their internal information technology and security resources with every other county office engaged in critical activities, such as health and public safety. It can be nearly impossible to get the attention necessary for election security unless it is the primary focus of those resources.

- Understand and *limit the threat surface area*; or all possible points of vulnerability for malicious attack.
  - Inventory all election related systems including the: voting machine and vote counting system; e-pollbook system; voter registration/election management system; mail ballot delivery and processing system; and online systems such as voter registration, mail ballot request tools, voter information lookup;
  - Map how systems work and data flows, and mark every single point of vulnerability;
  - Limit the threat surface area by making policy decisions that reduce points of vulnerability wherever possible (this is about managing risk, not eliminating it).
- *Employ defense tactics* and policies for each system—online or not:
  - Implement the Center for Internet Security's top 20 cyber controls. Do the top five first. These include:
    1. Inventory of Authorized and Unauthorized Devices
    2. Inventory of Authorized and Unauthorized Software
    3. Secure Configurations for Hardware and Software
    4. Continuous Vulnerability Assessment and Remediation
    5. Controlled Use of Administrative Privileges
    6. Maintenance, Monitoring, and Analysis of Audit Logs
    7. Email and Web Browser Protections
    8. Malware Defenses
    9. Limitation and Control of Network Ports
    10. Data Recovery Capability
    11. Secure Configurations for Network Devices
    12. Boundary Defense
    13. Data Protection

14 Controlled Access Based on the Need to Know
15 Wireless Access Control
16 Account Monitoring and Control
17 Security Skills Assessment and Appropriate Training to Fill Gaps
18 Application Software Security
19 Incident Response and Management
20 Penetration Tests and Red Team Exercises

- Employ election system-specific defense and detection tactics across specific systems:
- These can include all the hardening options that systems may have, such as locks, seals, chain of custody, advanced authentication, and so on.

Detect

- Inventory of Authorized and Unauthorized DevicesFor each vulnerability point identified in the mapping process, *consider a method of detecting* whether something anomalous has happened; or brainstorm the first place such an intrusion might be detectable.
- *Validate everything*; every available log should be checked including seals, time sheets, cameras, swipe cards, login data, registration statistics, and so on.
  - Behavioral analysis tools and procedures can and will point out what is going on. For example, voter registration follows a natural pattern year over year. Identifying the pattern and watching for anomalous behavior works.
- *Use forensics* when possible.
  - A forensics analysis of the software system employed can offer a high level of confidence that it is operating as certified. This is particularly true in the voting system environment. Comparing snapshots of deployed software with a clean reference copy during a live election is a powerful verification technique.
- *Conduct public audits* of the election results that allow for a visual comparison of the cast ballot record with the ballot itself.
  - Be transparent and brace for public scrutiny.
  - Crowdsourcing the election brings the greatest confidence, but also the greatest public scrutiny. “Sausage making” will be on full display. Consider publishing ballot images scrubbed of identifying marks. In the short run this can create volatility, and people may

scrutinize the office and the software used, but ultimately the confidence levels will be increased.
  - Work to investigate audit styles that bring the highest level of confidence to the most stakeholders. Consider the use of sophisticated yet efficient testing algorithms, such as risk limiting audits.

Recover

- For each vulnerability point, *assume a successful breach and determine how to recover*.
- Where possible, make policy decisions and investments that yield the clearest *path to recovery*.
  - For example, on electronic voting machines: after removing paperless systems consider that ballot marking devices are better than machines with paper audit trails. Digital scanning devices that create images of ballots are better than scanning devices that don't.
- Build in *redundancy that doesn't rely on technology*.
  - For example, paper pollbooks back up electronic pollbooks. Emergency paper ballots back up corrupted (or just malfunctioning) touch-screen or ballot marking devices.
- *Practice recovery* with professional staff, advisors, and vendors by running drills and exercises. Theory is only theory. Practice makes it real.

CHAPTER 24

Technology Procurement in Election Systems

David A. Bennett

Abstract Election administrators have a variety of responsibilities that extend beyond the management of election day. They are also responsible for the procurement of the voting systems that will be used by the public. There are a variety of approaches that can be utilized to make this process more efficient. Focusing on Florida, the author discusses the process that was utilized to innovate technology procurement and provides recommendations for the profession to close the information gap that exists between procurement experts, election officials, and vendors.

Keywords Technology • Procurement • Vendors • Coordination • Collaboration

I am the financial officer and corporate treasurer for VR Systems, Inc., an employee-owned company in the election business that sells electronic pollbooks and voter registration software. This software generates and holds voter registration data for use by local and state election officials during the voting process. In my role as financial officer and treasurer, I am responsible for financial forecasting, accounting, human resources, and

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other related functions. I am also involved in negotiating contracts for the acquisition and use of VR Systems technology and services, and other related relationships with local governments and other vendors in the election policy space.

My experience with technology procurement comes from more than 17 years of service in Florida state government with an emphasis on government procurement and contracting. There, I was responsible for overseeing large-scale projects involving the acquisition and deployment of information technology, hardware, and software across multiple government agencies. The end users were government agencies and, through those agencies, the general public.

Illustration of Technology Procurement

As one example, I worked for approximately three years on an intergovernmental contract for a statewide services portal for the State of Florida, now known as MyFlorida. This encompassed creating and implementing one of the first (if not the first) electronic government procurement systems in the nation. The purpose of MyFlorida was to create a seamless electronic experience for the general public when accessing Florida government agencies for state and local transactions, and to create a centralized electronic state purchasing process through the portal called MyFloridaMarketplace. An easy example of the part of this portal that faces the general public is the tag line "MyFlorida.Gov" that you see today on Florida license plates.

The MyFloridaMarketplace experience illustrates several points that can help election administrators in their purchasing process, particularly related to technology. The scale of this project was quite large and the concept was innovative at the time. Those of us involved were working on what we called the "bleeding edge." The procurement and installation of the technology necessary to bring about MyFloridaMarketplace required cross-functional teams that included representatives from every agency and in a range of specialties. For this process we pulled together experts in accounting, procurement, IT, and other subject matter experts (SMEs).

All the particulars were negotiated around the state's standard accounting system, called Florida Accounting Information Resource (FLAIR). The MyFloridaMarketplace steering committee involved political representatives from both houses of the Florida legislature and the governor's budget office, among others.

When implementation began, what we learned was that every state agency operated their own "homegrown" accounting system, and built their accounting system around their processes and missions. In practical terms, what this meant was that although FLAIR seemed to be a uniform state accounting system, it was supported by data coming in from a host of state agency systems, each of which operated differently. In even more practical terms, change orders started coming in almost immediately after the state contract was signed, and increased the cost of the project by approximately 40% over three years. From this, we learned the importance of involving cross-functional teams more extensively and earlier in the process so that when the final contract was executed, it reflected the realities on the ground.

A procurement process like MyFloridaMarketplace (MFMP or MyFlorida) follows a general set of principles. The process is controlled by state procurement or purchasing rules and regulations. These rules are different in every state but the approach is fundamentally similar everywhere. The rules are intended to provide a process for public officials to buy the goods and services that they need in order to do the things that public officials are asked to do; the process is intended to be fair and provide the best value in a way that is transparent to the general public. Fair means that the government does not show favoritism to any particular provider. Typically, government contracts are put out for bid in a public process that allows anyone to participate and demonstrate that their product or service meets government needs. Best value is a selection criterion that looks at price (or cost) but also looks at other characteristics of the companies that could be awarded the contract. Among those could be such things as past successful performance of the same sort of work for a different government entity (either in the same jurisdiction or another), past successful performance of different work for the government agency going out to bid on the current project, and the ability (and willingness) to service the contract. Each state has specific rules and regulations about the criteria for the contract award. Best value is used in some places instead of, or in addition to, lowest price. Finally, transparency means that the process is public. Requests for information and all the subsequent steps are advertised to the general public and award decisions are made in an open public forum.

The procurement process also proceeds generally in stages. As the first stage, a government office issues a request for information (RFI) about

how to address a particular problem or how to implement a particular aspect of its work. The RFI is used to collect information from potential vendors about what is possible in the field. In this stage, a SME can play a key role in providing information about different options and solutions and in interpreting the information that vendors provide. Some jurisdictions and agencies put this preliminary information out into the field as a request for letters of interest or intent (LOI). The LOI are statements from interested vendors that present their particular methods for investigating an issue and developing a solution. The information gathered through the RFI and/or LOI is used to determine the scope of the project, the work that is expected, and the deadlines. The scope and specifications of the project refer to the jurisdiction and parameters of the work. Specifications define how the work is to be done, including designation of required and optional components and processes. The work that is expected includes delivery and installation of purchased items and services and other activities including training, support when problems occur, and planning documents such as timelines of plans to design, implement, and test the items that are being acquired. Deadlines include not only final deadlines for delivery, installation, or implementation but also interim deadlines including deadlines for testing critical features and critical stages of a process.

When the scope, general parameters, and deadlines have been determined, the information is presented to the public in the form of a request for proposals (RFP). The RFP is advertised to the general public, or may be presented only to a limited group of vendors who have been determined to be qualified to provide the goods or services. Sometimes these qualifications are determined through a request for qualifications (RFQ). Through these processes, potential vendors demonstrate their qualifications to meet the requirements of the proposal. An invitation to negotiate (ITN) or an invitation to bid may be extended to all interested firms, or to only a select group of vendors determined to be qualified.

Vendors are then recommended, perhaps in some sort of order by lowest price or best value, and perhaps an additional demonstration of performance ability is required. Selection is typically through a funding authority such as county commissioners or the state controlling board. Contracts are drawn up and implementation begins. Through my work on MyFlorida and other similar projects I gained experience with all of these aspects, and can share a few observations that can be useful for election officials.

Lessons About Procurement for Election Officials

Election officials are involved with contracts for all sorts of hardware and software for voting systems and related products and services. And election officials know the end results that they want to achieve, the communications that they need in real time and otherwise between local and state offices, and the time frames that matter to their voters and their other stakeholders.

That said, gaps remain between what election officials need and what the procurement process generally provides. The technology of elections has changed significantly since the first wave of electronic voting systems were designed and implemented across the country after the Help America Vote Act (HAVA) of 2002, and election officials today may not feel prepared to buy new equipment, software, or related support services. Election officials are also familiar with the cost of changing technology, particularly software; as with all technology, the software that is used—whether for voter registration, casting ballots, or tabulation and reporting—has been frequently updated.

Election technology procurement also requires an orientation to a climate of constant change. Change over time is (and has been) inevitable in election technology. Hardware and software specifications change as new products are developed. As contracts are implemented, unexpected events occur and new needs are identified that may require additions (or change orders) to a contract. Election offices may also need to acquire technology in phases, due to limited funding overall, or due to limitations imposed by their local funding authorities. Over time, election officials and policy makers also adopt new methods of conducting elections that may also be linked to new technologies—or may be linked to technologies that are not linked to the policy change. All of these factors can result in a change in scope for an existing project or the need for a new project.

What this means is that more often than not, the process that I described will encompass change orders that increase the overall cost of the project. For example, a state may contract for a voter registration system that allows the registrar of voters to classify voter registrants as ineligible for a variety of reasons. But changes in state law may require that voter registrants be reclassified in a way that is not in the initial software. Or an ePollbook system may be designed, purchased, and implemented just before a state passes a law requiring voter identification, necessitating the addition of both software and hardware to allow for swiping government-issued IDs

at sign-in. To further complicate matters, a state legislature could mandate a new method of voting or registration, such as early voting or same-day registration, and also not adopt a requirement that local jurisdictions use related technology (such as signature recognition). What this means is that the problems and solutions are not aligned, and the opportunities to procure solutions are also not aligned—and what seems to be the most complete or comprehensive solution may not actually be authorized by state law. And as with all government processes, the time needed for acquisition expands dramatically where approvals are needed from multiple boards or commissions, and from state offices.

Some changes are inevitable, of course, and are part of all government contracting. Regardless of the reason, changes are also expensive. The cost of change orders is more than simply the monetary increase in the overall amount of a contract. Change orders involve the time of vendor staff and this cost is passed along with the changes. Change orders also require public time and attention through implementation and administration.

MyFloridaMarketplace illustrates an extensive effort and coordination that will be true for other state-level procurements. The challenge for government officials is to design front-end acquisition requests and later decision-making processes that are fully informed to minimize these change orders. Change orders necessitated by changes in law are necessary evils, but change orders driven by lack of expertise on the part of government officials are another problem altogether. There is an information gap between procurement experts, election officials, and vendors about the content and operation of various election systems and their components.

This gap occurs for multiple reasons, and these reasons may overlap. It could be the case that incorrect or insufficient assumptions were made at the outset about what was needed or what could be provided, or both. Incorrect or insufficient information in an RFI or RFQ is then reinforced in the RFP; this gap is magnified with each subsequent step of the procurement process. Any gaps on the front end are also magnified after a contract has been signed, during the implementation phase. This information gap generates change orders, cost increases, and inefficiencies that should be avoided—and can result in a product or service that is not fully useful.

Subject Matter Experts

One way to address this issue is to rely more extensively on SMEs in the procurement process. This can be done by hiring staff or by hiring temporary SME assistance to help write proposals and responses throughout the

procurement process. SMEs can also be called on to draft implementation plans for technology acquisitions. In short, SMEs are valuable all throughout the process including RFP solicitation and contract negotiation.

This can be done for the whole of a project or only for the most technical aspects. This may be too expensive for smaller local offices, but this could be a support that state offices provide. In thinking about the SME, it is important for election officials to consider how to develop an interactive and enduring relationship between the public office and the SMEs, and with the selected vendor(s).

Another effective method of gathering SME expertise is to contact national and state professional associations. In MyFlorida, we reached out to national associations such as the National Institute of Government Purchasing (NIGP) and the Florida Association of Public Procurement Officers (FAPPO), which is our state professional association for the field. What that helped us understand was how unique our project was; in other projects, these organizations had been a tremendous source of information. Here, however, we learned that other states had no best practice, no road map, and no lessons learned, and that was important in and of itself. These organizations offer training, information exchange, and certification such as Certified Public Procurement Officer (CPPO) and Certified Professional Public Buyer (CPPB). Even if hiring dedicated purchasing staff is not possible, these trainings and certifications and similar programs could be a cost-effective method of enhancing existing office capacity.

Election Administrators with Special Expertise

Another approach is to hire election administrators with more IT expertise or procurement expertise. IT in government is not as lucrative as in the private sector, and so this option may be more viable within state offices. By comparison, procurement expertise may be more affordable. Procurement expertise may also be valuable in developing both a realistic estimate of cost and a timeline for understanding the procurement process, which can involve many steps and feedback loops. A procurement specialist can assist in constructing contract provisions that will maintain strong relationships between the public office and its technology vendors.

Interactive Vendor Relationships

Vendor relationships are essential. Election officials at all levels should seek contract provisions that reinforce enduring relationships with technology

vendors. The changing environment shows us that the information gap will only increase over time; vendors will always know about their technology and election officials will always know about the problems that they want to address. What the technology procurement system needs are ways to develop enduring relationships that share information while needs are identified, while vendors are selected, and after the contract has been signed.

CHAPTER 25

Using GIS to Improve Accuracy and Efficiency in Election Administration

Kim Brace

Abstract In addition to managing voter registration and voting, election administrators in many local jurisdictions are responsible for dividing voters into precincts. This process requires election administrators to often use data from the Census and sophisticated Geographic Information Systems software for mapping. The process of redistricting presents a variety of challenges ranging from the technical use of the software to considering the different political boundaries that voters must be incorporated into. Discussed are the challenges of redistricting and a potential strategy to address the challenges and limitations.

Keywords Redistricting • Precincting • Geographic Information Systems (GIS) • Street files • Boundaries

My work in the election administration field began decades back, when I was the late Dick Smolka's student at American University, and he helped me focus on county and local election officials and why they do what they do. Dick is perhaps best known by younger election officials for his

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founding and operation of *Election Administration Reports*, the first and still key newsletter for the field. I was his associate editor for a time. Then, and later through my work as a journalist, I started to understand the differences between localities in election practices, where people are coming from, and how to interpret in common terms what local election officials are doing. How to interpret information in common (ordinary) terms was particularly important. And as a journalist, helping people to understand what is happening through a story is also important.

Pictures are a particularly powerful way to tell stories, or parts of stories. In the "old days" we had paper maps of political jurisdictions, state and Congressional districts, and precincts. Now we have more modern tools. Geographic Information Systems (GIS) is the newest tool that we can use to do this—to tell a story. GIS is computer based, and so helping election officials understand that GIS is not scary, but simply a modern, and more efficient, tool is an important part of what I do.

The Simplicity of Using GIS for "Precincting"

In talking with election officials about precincting, I start with the concepts of points, lines, and polygons. This is what election officials deal with all the time in the process of precincting, which is assigning voters' home addresses (the points) through their street (the lines) and how it relates to a particular precinct (the polygon). Once they understand these basic building blocks, they can see how GIS can be of use to them. They also see how to use this tool to help them as we move toward an era in which we are engaging in more frequent redistricting; they can be prepared for the changes about to take place.

This approach to precincting includes many different components and stakeholders. To accomplish it, we combine information from the US Census and other available resources. We usually include data from the county auditor or other entity which keeps track of the location and dimensions of land parcels (with their address, of course). This provides election officials with a ready data set that they can use as a resource. Today the Census has a wealth of data including geographic land features as well as political lines and man-made infrastructure such as roads; now we can overlay all of these on top of aerial photographs, so election officials can see these data together with GIS to help them more quickly and accurately define precincts.

Election officials can use GIS to identify and map "points" such as addresses, where people live, street intersections, and particular locations

such as polling sites. Election officials can also see "lines" such as streets, rivers, and railroads, and invisible lines such as county or city boundaries. They can count up voters (points) who live within line boundaries drawn as "polygons," like their precincts. When their legislature says, "Here is our new redistricting bill," the election official can take the different pieces of information and more easily see where the new districts lie. Shapefiles from the state government of new districts that contain this information make reprecincting much easier if election officials have access to GIS and know how to use it. If they have their registered voters properly "geocoded" (placed as a point on the map), they can easily see where precincts have been split by the new districts and the sizes of each piece. The GIS system can then help them redraw their precincts and constantly report back how many registered voters are affected in and by the new precinct(s), thereby allowing them to stay within their state's election law limits on the size of precincts. The GIS and aerial photographs can assist them in determining where best to place their polling place also. Figures 25.1, 25.2,

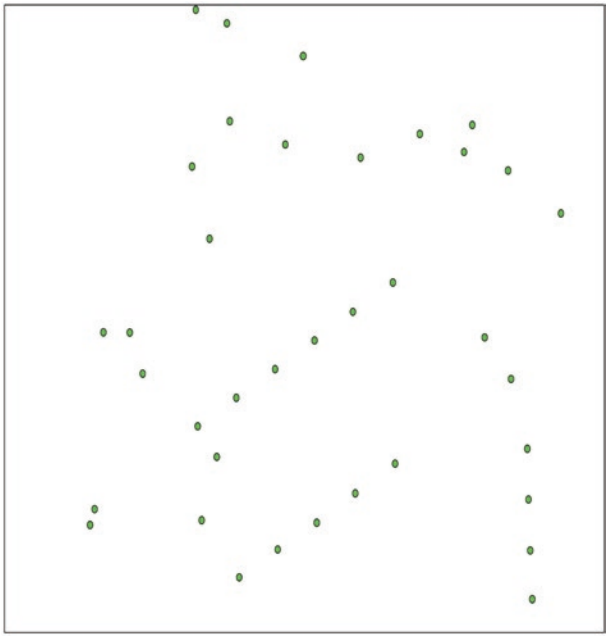

Fig. 25.1 GIS points as addresses, voters, intersections, polling places

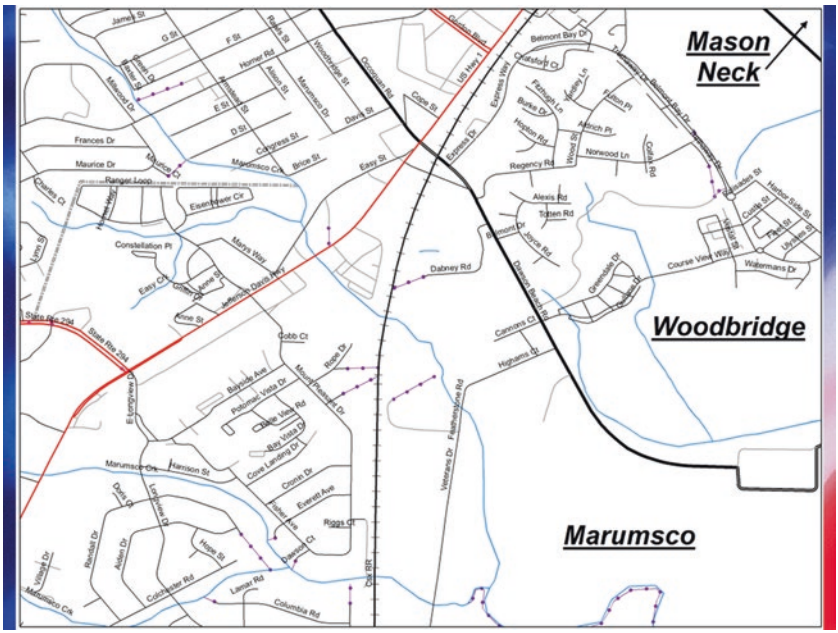

Fig. 25.2 GIS lines as streets, rivers, railroads, and invisible boundaries

25.3, and 25.4 illustrate these various GIS layers and how they all come together.

It is this overlay of a multitude of different districts (Congressional, State Senate, State House, local districts, taxing districts) that creates problems for election officials. This interaction creates different ballot styles, which increases the cost of conducting elections (more different ballots have to be printed) as well as leads to voter confusion for those who don't understand these different layers.

Practical Limitations

Many times the people at the state level who do redistricting do not reach down to local election officials for information; however, they should. One of the things I try to encourage local officials to do is to testify to state legislative bodies to remind them of (and identify for them) the impact of legislative decisions in terms of precincts and how voters interact with the elections process. Election officials can spot decisions that are

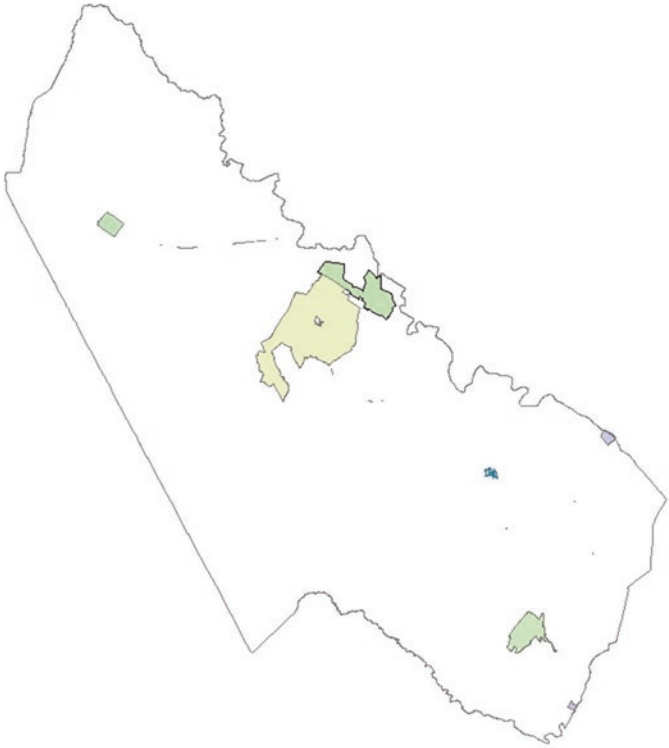

Fig. 25.3 GIS polygons as parcels, precincts, districts, city boundaries

made at the state level that will cause voter confusion, and thus also cause problems for local officials.

I also encourage legislators to review the various district boundaries they create with an eye on what happens when they overlay their plans on top of each other. Because state representatives tend to draw their own chamber's districts (State House members draw the State House Districts, while State Senators draw the State Senate Districts) they seldom look to see how one chamber's districts might impact the other chamber's plan. Failure to do so will lead to small pockets of people who have their own unique ballot style, even when there is just a handful of voters in that circumstance. Taking an extra day to check plans against each other can

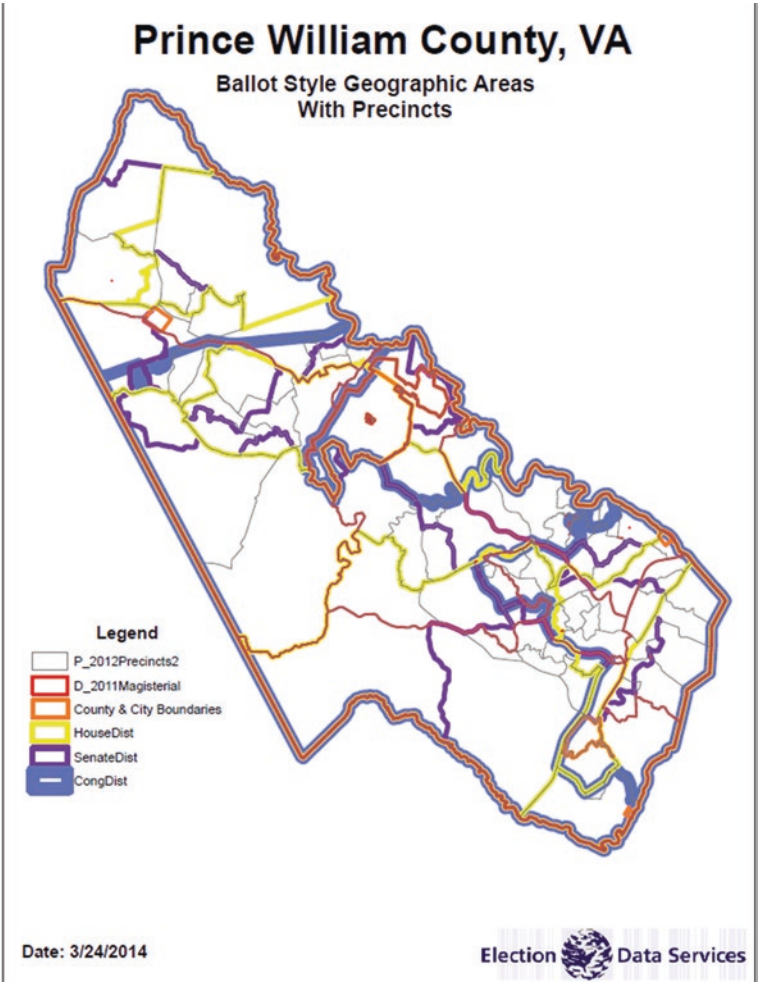

Fig. 25.4 GIS map illustration with multiple layer effect

greatly eliminate the headaches experienced by election administrators, who have to deal with all the variations possibly seen for the first time.

Legislatures draw district lines in ways that, generally, distribute population. But they don't take into account the details of the voter registration systems that local election officials use to manage voters and their precinct lines, and this creates confusion for local election officials when they try to

implement the new district changes. The heart of most voter registration systems is a file called the "Street File." This is a listing of all streets in the jurisdiction, many of which are broken apart at a particular address number when the precinct, district, city, or special taxing district changes. In addition, the street file may contain an indication of whether the precincts, districts, and so on, apply to either the "even" or the "odd" side of the street (when the boundary line goes down the middle of the street) or "both" (when the street is encompassed by an area). These street files can run thousands or tens of thousands of records, depending on the size of the jurisdiction. When redistricting occurs these street records need to be either reassigned and possibly reconstructed to a new district area or bifurcated with new address range breaks.

It's not as though the various legislative bodies all use "Main Avenue" or some other obvious thoroughfare in a straightforward way. Instead, when the various boundary lines are laid on top of each other, one ends up creating "sawtooths" or district lines that are jagged and that run back and forth across a street. The voter registration system's "street files" are immensely complicated to break apart and reconstruct to accommodate newly mandated sawtooth borders; ultimately, this can result in errors and potentially confusion for voters.

Another cause of significant voter assignment error deals with cul-de-sacs. A cul-de-sac is a single record entry in that 10,000-record street file. Election officials know they need to check and adjust the multiple records for "Main Street" or other streets with address breaks. But they miss that single record for the cul-de-sac and those voters tend to retain their old precinct assignment (maybe needing to go 5 miles to the polling place), despite the fact that all other voters in the area have been reassigned to the school two blocks away. The voters in the cul-de-sac probably talk with each other and they all know they need to vote the next day 5 miles away. If they would only talk with their neighbors over their back fence, they would discover that polling place two blocks away.

GIS and Relationship Building as a Solution

This entire process can be made much easier if GIS is used. The first step is to "geocode" the voter registration records and then compare their existing precinct assignment information (retained in the voter record) against the precinct number in that new precinct polygon. Where this information is different there is an error someplace and it needs to be investigated.

We have to increase the capacity of local election offices to use GIS to solve these problems. Because building permits and new street creation are typically initiated and maintained at the local level, it is usually better that research start at the local level than at the state level. Local officials have a better understanding of where new construction is taking place in their town, which means they have better information than state officials will. But, unfortunately, the resources to use GIS for redistricting and precincting at the local level are thin, and election officials are not necessarily trained to do this.

In addition to providing local offices with better tools, we need to encourage local election officials to rethink their basic approach. Local election officials are often focused on recreating or readjusting the street file records within the election office, but better information is often housed in another local office. One part of the solution is fairly straightforward. The local tax assessor is certainly aware of what is going on with new construction because new developments are revenue sources; they could be a valuable resource. Election officials, however, tend to recreate this wheel. They shouldn't. They need to talk to other county officials—such as the tax assessor—to identify the information that is already available to help with the precincting process.

Barriers to Success

Politics

Registrars and other election officials who engage in precincting must keep their focus on the technical parts of their work. They must also stay away from the political fights involved in this process. Election officials should be hesitant to get involved in political fights, but they should get involved in legislative practice that influences their work. There is a difference between appointed and elected officials in this process. The elected officials have a political hat on, but they need to remember they are elected for a particular county and by the people in that county.

Advanced Planning

Another barrier for election officials is not getting out in front of precincting when redistricting is happening and being prepared for the results. Election officials know the neighborhoods in their counties. The legisla-

tors from those counties know them too, and the legislators need to be reminded about how those voters will understand the results of the process and the results of different options. Election officials should remind legislators about which things to be cognizant of as they draw districts. This can be done regardless of whether an election official is elected or appointed.

Small Districts at County Lines

Legislators also need to be reminded not to "go into" other counties to capture a small group of people. Local election officials have to deal with this by creating tiny unique ballot areas. These tiny districts mean that different ballots and ballot styles have to be prepared for a small number of voters. This translates into a waste of county and state money as well as local resources. Legislatures need to build in additional time for local officials to overlay these maps to look for those small pockets and figure out how to eliminate them, because these pockets cause problems for local election officials and cost money.

Preparing Boundary Changes

New and better technology also means that election officials and other county or local officials need to be prepared to rethink existing political-geographic lines. For example, New England comprises many small townships. As the technical accuracy of Census files have been improved, we have cases in which the national understanding of the town boundaries is different than what local officials believe to be the case. When the Census drew their original township lines in the 1970s, the technology and ability to observe and record granular details was significantly less sophisticated than it is today. As technology has improved and our subsequent understanding of where these boundaries are has changed, discrepancies arise and the process of fixing these discrepancies is ongoing. The process has implications for election officials and for voters as well who need to be able to understand the results of these decisions and act on them.

CHAPTER 26

Common Physical Barriers That Limit Access for Voters with Disabilities and Options to Solve Them

Jim Terry, Kaylan Dunlap, Steve Flickinger, and Dan Woosley

Abstract Successfully conducting an election requires that election administrators consider the diverse needs of their constituents and provide polling locations that allow those with disabilities to access the polling location and cast a ballot without encountering barriers. Having a working knowledge of the terminology and standards used to assess polling location accessibility can ensure that election administrators and poll workers are creating an environment that allows all voters to cast a ballot.

Keywords Accessibility • Americans with Disabilities Act • Polling locations

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By the morning of an Election Day, a lot of hard work has gone into the preparation and set up of polling places. Ramps and platforms have been installed, signs have been hung, and steps have been taken to assure that every voter, regardless of disability, is able to easily and safely access their assigned voting areas. The problem is that things change during the busy voting day. Chairs and other obstacles are accidentally moved into the accessible routes, voting equipment gets bumped out of place, and signs are flipped around by the wind or blown down. Most of this happens unintentionally, but the fact remains that throughout the day, these changes lead to many polling places becoming inaccessible for some voters. In order to help visualize areas of concern, try to see the polling place as a voter with a disability might experience it. Try to anticipate what issues they might experience so that common problems can be identified and addressed, and poll workers will know what to do if these or other issues are encountered.

Components of Accessibility

Accessible Routes

The first concept to be understood is the "accessible route." The accessible route is a continuous unobstructed path connecting all accessible elements and spaces at the polling place. It is the easiest and safest route for people with mobility disabilities who use wheelchairs, scooters, or walkers to get around to everywhere they need to go in order to vote. Exterior accessible routes always include the sidewalks and walkways leading to the accessible entrance and may include parking access aisles, curb ramps, ramps, and sometimes an exterior lift.

Interior accessible routes include corridors or hallways and doorways plus certain aisles and clear floor spaces within the voting area. They may also include ramps, elevators, and platform lifts. One can imagine the accessible route as a "red carpet" that begins where a voter arrives and that allows them to get to every place they need to go so that they can vote. Of course, it is not visibly shown on the floor, but it could be.

The accessible route includes the route leading from the sidewalks and accessible parking to the accessible entrance. From there, visualize the accessible route going down the corridors and into the voting area. Once inside the voting area, the accessible route leads to all the various stops in the voting process. From the site entrance to any voter information and translators' tables (if provided), to the voter registration check in tables, on to the ballot

marking device (if employed), and the American with Disabilities Act (ADA) accessible privacy booth, then to the scanners, and back out to the exit. This "red carpet" accessible route has to be free from obstructions such as steps, overgrown landscaping, trash cans, furniture, boxes, and anything else that might block someone who is trying to follow the accessible route. The accessible route does not have to be physically marked in any way, but it has to be provided and it has to be kept clear at all times.

Although 4 or 5 feet of clear width is preferred, accessible routes must always be at least 36 inches wide, with one exception. The route can narrow to as little as 32 inches for no more than 24 inches (2 feet) in distance at a time. An example might be a doorway that is 32 inches wide or a place where a column narrows the route. This minimum width will allow someone using a wheelchair the opportunity to push themselves through the narrow space without hitting their hands or elbows. But again, it can only be as narrow as 32 inches and can continue for no more than 24 inches (2 feet) at a time. If something moveable narrows the width for more than that 24-inch segment, move the obstruction to provide the full 36 inches of width along that part of the accessible route. While you are checking the corridors, also check to make sure that all of the doorways on the accessible route are propped open with nothing blocking access or reducing the clear width to less than 32 inches. For example, make sure that no one props a door open with a trash can, cone, brick, or large stone. A propped door may be helpful, but if it is done with an object that narrows the clear width, the object itself becomes an obstacle.

While this accessible route will have been set up at the beginning of the day, a poll worker should be assigned the task of walking the accessible route at least every two hours using the Department of Justice *ADA Checklist for Polling Places* to make sure accessibility is maintained throughout the day and to make sure that these clearances are still provided.[1] If you find anything obstructing the accessible route, move it immediately (Figs. 26.1 and 26.2).

Circulation Path

Like voters with mobility disabilities who use the accessible route, voters who are blind or with low vision will use what is called the "circulation path." The circulation path includes the accessible route but is much

[1] Accessible at https://www.ada.gov/votingck.htm.

Fig. 26.1 Accessible polling location

bigger than that. Usually, the circulation path includes all of the areas where voters can walk. It also includes the headroom above the walking surface up to the height of 80 inches. Many polling places have protruding objects that are more than 27 inches above the floor, and less than 80 inches above the floor where they're above the voters' heads. If these objects are within this zone between 27 and 80 inches above the floor and they hang off of the wall more than 4 inches into the circulation path, they can be a problem because these objects will not be cane-detectable by someone who is blind or who has low vision.

Places where headroom is less than 80 inches above the floor can also create similar problems for voters who have vision loss. Features that can be detected with a white cane can be placed below these hazards. Fixed objects or items such as orange cones that are provided by the Board

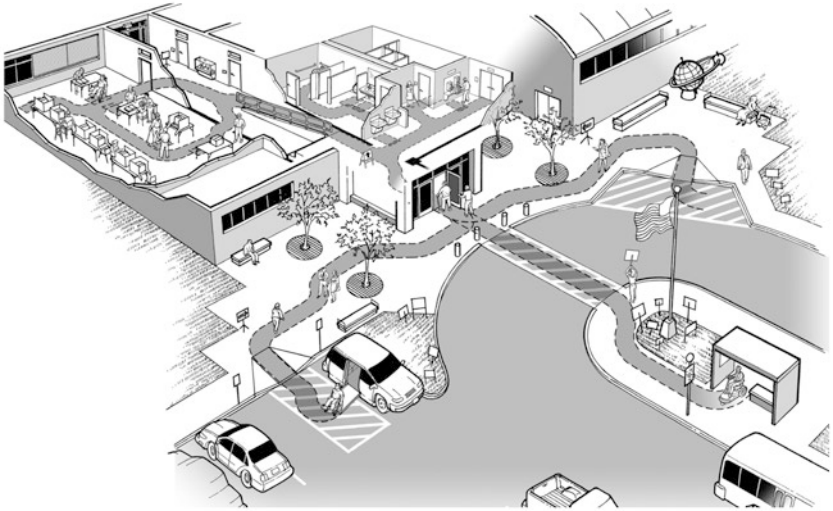

Fig. 26.2 Accessible routes

of Elections can be placed below protruding objects to prevent accidental injury to voters who are blind or have low vision.

Imagine a voter who is blind walking with a cane who encounters a large coat rack or a protruding bookshelf that is hung high on the wall. That coat rack or shelf would not be cane-detectable and could injure that voter. Some of the worst problems identified during accessibility surveys of polling places include big wall-mounted fire extinguishers, air conditioners hanging over entrance walkways or ramps, stairways with open undersides, equipment brackets and controls in school gymnasiums, and pipes hanging too low in unexpected places. Sometimes temporary scaffolding has large open areas near the ground that are not cane-detectable and that are situated along the accessible route or circulation path. Those open areas will need low horizontal straps or orange cones so that people using canes don't mistake those openings for a walkway.

If placing a cane-detectable element like an orange cone under a protruding object would narrow the required accessible route to less than 36 or 32 inches wide and there is no other solution to protect voters who are blind or have low vision, a poll worker, sometimes referred to as an accessibility clerk, should be stationed there to warn people to watch their

heads. As maintenance rounds are conducted every two hours, the monitor should make sure these features have not been moved and are still correctly protecting the voters from these head and arm bangers. For what it is worth, the cones will also help voters who are looking down at their smartphones or just not paying enough attention to where they are walking.

Once the accessible route is clear from any obstruction and areas with low headroom and protruding objects are protected, a search for floor obstructions will be necessary to ensure that any electrical cords in voter areas are not tripping hazards. When the voting area is crowded, extension cords that cross voter areas may be hard to see, so they should always be covered with a thick mat or securely taped down wherever the voters will walk across them. It is also best practice to run any power cables outside of the 5 foot by 5 foot clear floor areas on the voter sides of accessible voting equipment to make turning around in those areas easier for everyone, including walker, scooter, manual wheelchair, and power chair users.

By paying close attention to these important details, these kinds of issues can and will be identified and corrected before they become major problems during the day. Then everyone will be able to vote on Election Day without encountering these common barriers to accessibility.

CHAPTER 27

Communication and Etiquette Considerations When Working with Voters Who Have Disabilities

Jim Terry, Kaylan Dunlap, Steve Flickinger, and Dan Woosley

Abstract When trying to provide the most optimal voting experience for voters, it is important to understand who they are and how they see themselves. This is especially true of voters with disabilities. The way individuals identify their disability as a part of their life and how they adapt or adjust to address challenges associated with disability will not always be the same. When serving the public and working with voters, it is important to understand that there are diverse orientations toward diversity and to not assume what type of resources a voter may need to ensure that information is communicated effectively.

Keywords Accessibility • Americans with Disabilities Act • poll workers • communication

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When one is planning to travel abroad, researching the etiquette and appropriate ways to communicate in the destination country is both advisable and helpful. Just as in international travel, this approach to interacting with the people you meet may be helpful in major cities where different cultures dominate certain communities. Understanding others and how to treat them appropriately is always the key to proper etiquette and effective communication regardless of the differences that may exist.

Throughout the Election Day you will probably find yourself around people who are unlike you in various ways, culturally and physically. Every person you meet has something that is different from you. One may wonder how we can communicate or help others in our work if everyone needs different things. The answers can be found by understanding our differences and responding based on that knowledge. Such is the case with poll site etiquette and effective communication with voters with different disabilities.

Understanding appropriate poll site etiquette and communication are two of the topics covered in a series of online training videos produced by Evan Terry Associates (ETA) for poll workers in New York City.[1] Serving voters who have mobility-related disabilities, such as those who use wheelchairs, scooters, walkers, and canes, will certainly differ from the ways you respond to the needs of voters who are blind, deaf, or have speech-related or cognitive disabilities. To ensure the best results, ETA worked with dozens of voters with disabilities to create poll worker training videos that focus solely on proper etiquette and effective communication with voters with disabilities.

When it comes to exercising their right to vote, people with disabilities are no different from anyone else. Yet historically, the voting rates of people with disabilities nationwide have been significantly lower than that of others. One of ETA's objectives in producing these poll worker training videos was to help reverse that trend. Well-trained poll workers can actually help to make sure that each and every person with a disability has an opportunity to vote in an integrated environment that is both dignified and convenient. We've found that video instruction helps poll workers understand the challenges associated with voting by people with disabilities and how they can help to eliminate or minimize those problems. The videos demonstrate the most common barriers to access that poll workers are most likely to encounter on Election Day and that they can correct.

[1] Training videos are accessible at www.boevideos.com.

So, what is appropriate etiquette and how can poll workers communicate effectively with voters with disabilities?

Some voters may consider themselves people with disabilities; some may consider themselves simply as people who live their lives differently. Each person has different strengths and skills. Some people use wheelchairs, crutches, hearing aids, a white cane, or other devices to live independently. To some people, an automobile could almost be considered a mobility device to get them to their poll site because those people would tire if they had to walk a long distance.

As with anything new or unfamiliar, it's not uncommon to be unsure how to best interact with someone who is a bit different from you. You may fear saying something inappropriate or offensive if you've not been around someone with that disability. To help alleviate those fears, the videos give poll workers confidence in how to best interact comfortably with people with a wide variety of disabilities. The key lesson conveyed is to communicate directly with the person and ask them if they'd like any assistance and, if so, how you can best help them.

Some disabilities are obvious while many others are not. This can create a challenge. Just because someone has a visible disability doesn't necessarily mean that they are in need of assistance. That's why help should only be provided when it's requested. If anyone asks for help and it's a simple request, most poll workers can simply provide it. If it's a complicated request, or if it will take much time or otherwise distract one from their assigned election role, you'll need to have a policy about what individual poll workers should do. It may require stopping and helping immediately, referring the voter to a specially trained poll worker, or referring them to the person in charge of the poll site.

There is a good chance that poll workers will come in contact with voters who have limited mobility during Election Day. They might use a wheelchair, a scooter, a walker, or a cane, or they might not have any visible signs of their mobility disability. Take care to respect each person's space. Don't hover over them. Avoid touching them or any equipment they might be using. For most people, that equipment is part of their personal space and should be respected. Most people do not like to be touched by strangers. People with disabilities are usually no different in that. Also, be sure not to ever push someone's wheelchair unless asked. It's their chair and they will want to keep control over it whenever they can. So don't just push them where you want them to go.

Another group of people with disabilities is those who have communication-related disabilities; many are deaf or hard of hearing. These disabilities are not always easy to spot so be alert and think about how to communicate most effectively.

The videos also instill an important part of communicating effectively—the poll workers' attitude. Poll workers are reminded to think about the volume and their tone of voice when dealing with voters, especially those who are deaf or hard of hearing.

It's important not to make any voter feel as if they are an inconvenience. Each poll worker is there to assist and to serve, so let everyone know that's your purpose. Don't be patronizing or talk to anyone like they are a child. If they're voters, they're adults, so treat them that way. Following these key points not only will help make the voting experience more pleasant, but voters will be even more likely to participate in future elections.

Being a good listener is one of the best ways to be an effective poll worker. No voter likes communicating with someone who only cares about putting in the minimum effort and time and does not take the time to listen to them. This is especially applicable with voters who have cognitive, intellectual, mental, or developmental disabilities that affect their processes of perception, memory, judgment, or reasoning. These are usually invisible disabilities. A few examples are dyslexia, attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), post-traumatic stress disorder, autism, Down syndrome, and dementia.

Be patient, flexible, and supportive when assisting anyone who seems to be having difficulty in the poll site. They may have trouble coping with the crowd, confusion, or noise. They may have difficulty understanding or interacting with you, or even just reading instructions or their ballot. Take time to understand each voter and make sure that they understand you. Be attentive to what they're saying. Listen to them, and don't try to finish their sentences. That might feel like you'd be helping, but in reality you'd just be just cutting them off.

When assisting people with cognitive disabilities, try to limit distractions and keep things simple. Just take everything one step at a time. You may provide assistance in order to help them understand the written instructions but be careful not to tell them for whom to vote. Give them as much time as they need for understanding instructions and making decisions. Your patience and care for these voters will help them feel at ease as they cast their vote.

There are many people who use service animals for reasons that may not be visible or apparent. If a voter says a dog is a service animal, then it

is permitted in the poll site. A service animal is neither required to "wear" identification such as a vest or bandana nor is the voter required to provide documentation that the dog is "certified." If a dog is not under control, you can have it removed, but that is seldom a problem with trained service dogs. Finally, service dogs are not pets. When service dogs are in a poll site, they are working. That means you should never touch or interact with the animal. These dogs have a special job to do and petting a dog can distract it.

Eye contact is also important for all voters. Looking each person in the eye is a good way to demonstrate that you are focused on them. Speak directly to the voter, especially when communicating with voters who may be accompanied by an interpreter, personal assistant, or family member. The poll worker might need the help of the assistant to communicate with the voter, but keep in mind that it's the voter you are helping, not their assistant. So make sure the voter is the focus of your attention.

Speak clearly and use short, simple sentences. Don't pretend to understand if you don't; it's okay to ask them to repeat themselves. If they're having a hard time understanding you, don't shout. Most of the time volume is not the problem, but rather background noises or the tone or clarity of the speaker's voice. That's why it is important to keep your hands and other objects away from your mouth and not to chew gum. This will make the task of reading your lips much easier for the voters who read lips. If the voter doesn't understand something you've said, try saying your question or comment differently. If they didn't understand you the first time, chances are that simply repeating it again won't help. Sometimes different words are heard and understood better than others. So try again, but in a way that is simple and clear. Finally, if verbal communication isn't possible, or, if the voter prefers, have a pad of paper and pen handy for written communication.

Some voters will have speech-related disabilities. Just like when you're working with a voter who is deaf or hard of hearing, if you don't understand something the voter said, don't pretend that you did. Ask the voter to repeat what they said and then repeat it back to them to be sure you understood them correctly.

As children we were taught to treat others the same way we would want to be treated. That is the perfect mindset for poll workers to have as they serve every voter—treat everyone with respect and dignity. It might seem obvious but it's easy to forget, especially when choosing your words and actions. That's why it's important to focus on the person and not their

disability. Put the person first and the disability second, even in choosing your word order. For example, a voter who uses a wheelchair is a person with a disability, not a disabled person. Don't use words like "crippled," "handicapped," or "special needs voter." Those words can be offensive or demeaning to many people.

Voters with disabilities will be more open to communicating their questions and concerns with a poll worker if that worker displays patience and respect for them, their disability, and their thoughts. Simple actions like using a person's name, making eye contact, and actively and patiently listening when a person speaks will make the voter feel appreciated and respected. Actively practicing patience is critical.

Poll workers play a very important role in providing each and every eligible citizen the opportunity to vote without regard to ability or disability. It is important for election officials to direct the hard work and attention of poll workers to the details of communication that provide voters with disabilities with these opportunities. These communication tools are important to use with all voters, and help protect the civil rights of voters with disabilities as well.

CHAPTER 28

Operational Solutions That Help Voting Work for Everyone

Jim Terry, Kaylan Dunlap, Steve Flickinger, and Dan Woosley

Abstract This case study presents the election monitoring best practices that Evan Terry Associates (ETA) has observed and developed to be shared with polling locations across the country. There are numerous details to observe and many distractions that can divert Americans with Disabilities Act (ADA) monitors and poll workers during an actual election, especially relating to little or lesser known issues of accessibility for voters with disabilities. The best practices presented can help to consolidate, expedite, and focus accessibility monitors throughout the country as it relates to barriers to accessibility issues at polling places.

Keywords Accessibility • Americans with Disabilities Act • Polling locations • Poll workers

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Without question, the key player on Election Day is the poll site coordinator, a role that can have many different names. Each polling place is assigned a leader (or leaders) who have full authority to conduct polling efforts at that site during an election event. The role of poll site coordinator is to serve as captain of the ship, so to speak. This individual takes on the daunting duty and responsibility to make sure that voting is a positive experience for voters and poll workers alike and it requires the individual to undertake a considerable amount of training to acquire all of the requisite knowledge and skills to perform during a grueling 12- to 15-hour Election Day.

Although the poll site coordinator's individual duties and responsibilities are numerous, varied, and can certainly be intimidating, Evan Terry Associates (ETA) has observed that, in many election districts, the area of least focus has been a thorough understanding across the election office of the accessibility needs of those voters with disabilities. ADA (Americans with Disabilities Act) requirements can seem to be overwhelming in quantity and scope. Historically, poll site coordinators have been ill-equipped to address in any meaningful way a physical barrier to accessibility at a polling place because they have no actual authority outside of the immediate voting process and procedure.

In order to ensure that no citizen is denied any protected right due to a disability, ETA has determined from its observations and experience that there are three key areas on which every board of elections should focus as it relates to physical accessibility at polling places. These key areas center on (1) practical ADA-related poll site coordinator training, (2) ensuring better ADA training for polling staff, and (3) providing knowledgeable on-site ADA expertise and/or assistance. Many boards of elections have vigorously and productively addressed all three of these key issues during the past several years, which have greatly improved access throughout their jurisdictions.

One important question revolves around whether the results of polling place accessibility surveys are tied to the poll workers' training. In other words, how do poll workers know what barriers to accessibility exist at their site. The absence of that knowledge is a formula for failure to provide an accessible polling place. Poll worker training courses are rife with policies, procedures, and laws pertaining to the actual ballots and voting, and rightly so. The structure of the training is generally very well thought out, organized, managed, and very inclusive in everything related to polling policies and procedures during an election period,

including voter registration and election administration. Accessibility is one more very important topic that must be covered in that training. ETA's experience indicates that the most effective approach to accessibility training is the positive approach that the jurisdiction wants to make the voting experience easy for everybody, including people with disabilities. While it is certainly reasonable to mention the fact that access to voting is a civil rights requirement, it may be best not just to focus on the ever-increasing number of ADA lawsuits that require it. The term "disability friendly" is a great one to put the concept into a proper perspective.

Training sessions are generally taught by highly qualified trainers—typically those who have served in various poll worker roles for several years. Unfortunately, often there is little to no content that includes a practical and nuanced focus on disability awareness, including the state of accessibility at the very site to which they are assigned. Of course, this limitation begs the question: what efforts have been exercised to provide a full accessibility survey of the facilities in the election district, including transition and action plans to ameliorate whatever is required to make the site fully accessible? If it hasn't been done, it should be.

A frequent observation by ETA during poll worker training, especially when attempts are made to share accessibility theories and requirements, is that demonstrations and explanations can be entirely wrong or misleading. Complex standards such as door maneuvering clearances, turning spaces, and protruding objects have been incorrectly demonstrated by the trainers of accessibility requirements due to their lack of knowledge of the ADA standards. These examples, which are critically important to voter entry, access, and exit, are just a few of several nuanced topics of the ADA requirements that are sometimes discussed during training sessions. Because they are little known by the consuming public, including the teachers of the polling process, confusion often ensues.

One of the ongoing efforts by ETA architectural accessibility specialists has been to review election cycle documents, which include existing training materials, resulting in composing and editing accessibility dialogue into the various poll worker training manuals, such as those provided for General Poll Workers, Accessibility Clerks, Interpreters, Ballot Marking Device Operators, and Poll Site Coordinators. The contents of training presentations, guides, videos, and tests for each of the specific roles also need to be coordinated with the manuals so policies and procedures are consistent. Election officials are encouraged to have ADA specialists perform this function annually, or whenever the content of training materials change.

One specific topic that is sometimes absent from these documents is the lack of discussion of the legal requirements of the Americans with Disabilities Act—the ADA. Existing documents usually feature the 2002 Help America Vote Act (HAVA) which mandates that all voters be provided the opportunity to vote privately and independently. However, there is usually little or no discussion of the civil rights law—the ADA—that prohibits discrimination against individuals with disabilities in all areas of public life, including access to all public and private places that are open to the general public, including those used as polling places.

It is important to include the ADA's intent in any "Legal Notice" section of every training manual. Likewise, including a segment on disability awareness will benefit poll workers, and possibly an "ADA/Accessibility Supplement" to accompany the various manuals and materials. The addition of content to enhance and explain the meaning and understanding of various accessibility terms and concepts, explanations of how each accessibility feature at the polling place is supposed to work, descriptions of how to maintain the accessible features, and explanations of how to communicate effectively with people with a variety of disabilities will serve to improve poll worker performance during the course of the election day.

One of the results of ETA's polling place surveys for the City of New York was the development of poll worker training videos that are used in training poll workers and others associated with polling place setup and operation. This type of visual instruction is beneficial to poll workers' understanding of the challenges associated with voting by people with disabilities and how they can help to eliminate or minimize those problems. The videos demonstrate the most common barriers to accessibility that poll workers are most likely to encounter on election day and specifically the types of barriers that they can correct. Most of these training videos each focus on the particular poll worker positions used in the City, and include the following topics:[1]

Communications and Etiquette (Parts 1 and 2)

[*For all poll workers*] Describes how to ensure that each and every person with a disability has an opportunity to vote in an integrated environment that is both dignified and convenient; demonstrates communication with real people with a broad variety of disabilities that affect communications;

[1] These videos can be readily viewed at www.boevideos.com.

describes etiquette for working with people with disabilities; demonstrates scenarios that might occur on election day and how they can be resolved.

Accessibility Clerk Responsibilities

[*For the Accessibility Clerk*] Accessibility Clerks are poll workers on the front lines who interact with voters and ensure that every voter has the physical opportunity to cast their vote at a polling place in an environment that is safe, dignified, and convenient. This video features the duties of the Accessibility Clerk, which include posting signage, staffing entrance and interior doors and elevators, and providing other assistance to all voters.

Verifying Voting Equipment Setup

[*For the Site Coordinator and Accessibility Clerk*] This video shows how to inspect and measure polling places to verify that required door maneuvering clearances, accessible routes, and clear floor spaces at equipment are being maintained. It describes to Site Coordinators what to look for when verifying the voting equipment setup and how to correct any problems that are found, including making certain that all the tables and voting equipment will properly fit into the voting area. It describes how to use their drawings that show exactly where everything needs to be placed with dimensions, and it describes how to read and interpret those drawings.

Signage

[For the Site Coordinator and Accessibility Clerk] This video describes the use and placement of various accessibility notification, directional, and location signs used on election day, and it describes where and how to secure signs and the requirement to periodically check them.

Ballot Marking Device (BMD) Accessible Features and Operation

[*For the Site Coordinator and Ballot Marking Device Inspector/Operator*] This video describes how to set up and verify that all additional accessories are on hand and it demonstrates how to use each of the accessible features of the Ballot Marking Device for people who have various types of disabilities.

Produced for viewing in training classes and for review by individual poll workers whenever they like on their cell phones, election day monitoring has shown dramatic improvements in accessibility for voters with disabilities after poll workers have watched these videos. The use of accessibility specialists as Election Day ADA monitors or observers can also be very beneficial. The intended purpose of such monitoring is to help the Board of Elections meet its ADA compliance obligations by verifying the ongoing compliance of temporary equipment (portable ramps, curb ramps, cones, directional signage, the use of mats), interior configurations of polling equipment, clear floor spaces, and accessible routes. Monitors can also help poll site workers to better understand the requirements of the Department of Justice *ADA Checklist for Polling Places* as it applies to existing barriers observed in that jurisdiction's poll sites; and how to facilitate effective program access in existing polling places.[2]

Election officials can improve Election Day ADA compliance by focusing on training for poll site leaders that includes the practical conditions of the ADA requirements for the sites in the jurisdiction. They can also focus on training that emphasizes a message of service to all voters, rather than focusing on lawsuits. Last, election officials can seek out ways to ensure better ADA training for polling staff and providing knowledgeable on-site ADA expertise and/or assistance.

[2] For ADA checklist see https://www.ada.gov/votingck.htm.

CHAPTER 29

The Value of the Election Administration and Voting Survey

Sean Greene

Abstract This case study examines the implementation of the Election Administration and Voting Survey (EAVS). EAVS is the only national survey to capture data related to the voting and elections process in every state and generates a phenomenal amount of data. Of course, the numbers most people care about are the results—how many votes the candidate they support receives. But beyond the results is a wealth of data related to how elections are run, from how many citizens are registered to vote to how many people cast ballots during early voting, to the number of provisional ballots cast, counted, and rejected. The EAVS captures this data and tells the story of the nuts and bolts of the voting process for both the voters and the election officials charged with administering elections. The importance of this type of data collection, what goes into administering a survey of this scope, the challenges in collecting this vast amount of data, and the potential for improvement will be discussed.

Keywords Election • Administration • Voting • Survey • Research • Data

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Elections generate a phenomenal amount of data. Of course, the numbers most people care about are the results—how many votes the candidate they support receives. But beyond the results is a wealth of data related to how elections are run, from how many citizens are registered to vote to how many people cast ballots during early voting, to the number of provisional ballots cast, counted, and rejected. These data tell the story of the nuts and bolts of the voting process for both the voters and the election officials charged with administering elections.

From June 2016 to June 2018 as an elections specialist and director of research at the US Election Assistance Commission (EAC) I managed the only national survey to capture this type of information for all states, the Election Administration and Voting Survey (EAVS). In this case study I will discuss the importance of this type of data collection, what goes into administering a survey of this scope, the challenges in collecting this vast amount of data, and the potential for improvement.

What Is the EAVS and Why Is It Important?

The EAVS is a biennial survey which collects, analyzes, and reports on state-by-state data related to the administration of federal elections. It has been administered since 2004 and includes data about voter registration, military and overseas voters, mail and absentee voting, poll workers and polling places, provisional ballots, and voting technology. An additional survey initially called the Statutory Overview (now called the Policy Survey), first administered in 2008, provides information about state law and practices to inform and provide context to data reported in the EAVS.

Why is this important? This data and analysis can provide voters, elected officials, and the media a deeper understanding of how elections are run as well as identify trends and emerging challenges. For election officials, it can provide information not only about their own jurisdiction, but about neighboring jurisdictions and insight into best practices they or other jurisdictions may be using. Using and applying lessons from data analysis can lead to new and innovative ways to manage elections.

The Nuts and Bolts of Analyzing the Nuts and Bolts

The EAVS is an enormous endeavor, both for those administering it and for those responding to it. It asks hundreds of questions and generates hundreds of thousands of data points based on local jurisdiction-level data

from all 50 states, the District of Columbia, American Samoa, Guam, Puerto Rico, and the US Virgin Islands.

In this section I will provide a picture, albeit incomplete, of some of what goes into implementing the EAVS. I will focus on five areas:

- Survey approval and public comment;
- Who administers the EAVS;
- Technical assistance;
- Who responds to the EAVS; and
- Completing the survey and validating the data.

Survey Approval

Through the Paperwork Reduction Act (PRA) the federal government requires that information collections like the EAVS be approved by the Office of Management and Budget. This is to ensure that undue burdens are not placed on the public—in the case of the EAVS the states—in responding to these types of requests from the federal government.

Although there is a touch of irony that the PRA involves completing some paperwork (electronically at least), it is an important reminder that asking states to respond to a complex and time-consuming survey is not to be undertaken lightly. Additionally, during this review process which can take four to six months, there are two mandated and incredibly helpful public comment periods. The survey questions are published and in 2016 the EAC received dozens of comments from concerned individuals, advocacy groups, as well as election officials.

Who Administers EAVS

The EAC administers the EAVS through a contractor hired via a competitive bid process. This has been the case for every EAVS since its inception in 2004. The contractor is the entity that sends out the survey to states, assists jurisdictions during the data collection process, provides analysis, and drafts reports. As I will discuss below, working with a contractor can provide a number of advantages including allowing the EAC to work with some of the foremost experts in the field as well as those who are experts in survey administration.

Technical Assistance

Another advantage to working with a contractor is the staff, time, and resources that a contractor can utilize. During my time at the EAC there was a staff of fewer than 30 people and of those only myself and one other staff member was focused on research and the EAVS. The EAC has many other responsibilities and manages to accomplish a great deal with a lean staff. However, two researchers are not enough to administer, manage, and provide all the assistance the states need when responding to a survey of this magnitude.

One of the key components of administering this survey is providing technical assistance to states at all stages of the survey. For the 2016 EAVS two examples of this assistance come to mind that were critical in successfully conducting the survey. First was an in-depth needs assessment of each state in the summer before the November election. This allowed the contractor to establish a working relationship with the appropriate points of contact and get specific information from the states on how they would respond to the survey and any particular needs or limitations they had.

Second, after the election when states were in the midst of responding to the survey the contractor had nearly ten technical assistants tasked to help states answer any questions they had about the survey. They responded to hundreds of inquiries and were able to assist states on a variety of issues, from technical questions about completing the spreadsheet, to larger questions about definition of terms in the survey.

Who Responds to the EAVS

The simple answer is that the states, the District of Columbia, American Samoa, Guam, Puerto Rico, and the US Virgin Islands respond to the survey. In reality, this varies a great deal from state to state. The EAVS gathers data from states at the jurisdictional level. In most states this is at the county level, and some is at the city or township level. States are responsible for collecting this data for all their jurisdictions.

Several states in 2016 were able to respond to a majority of the survey using information in their statewide election management systems—sometimes these are referred to as top-down states, where the information is gathered and to some extent controlled at the state level. These states often have much of the EAVS questions pre-programmed into their

statewide management systems and can generate responses with relative ease. One challenge for top-down states is ensuring the data generated for the EAVS from their systems can be converted into the EAVS template for submission.

On the other end of the spectrum are bottom-up states where the survey questions need to be sent to each jurisdiction and then each jurisdiction needs to respond and send the survey back to the state. The states then need to combine all these jurisdictions' data into the EAVS format and submit it in one file. This can present numerous challenges. In some cases states have little authority to ensure jurisdictions respond. And for jurisdictions not familiar with the survey it can be confusing. In these cases, the local jurisdictions often reach out for technical assistance. And in several jurisdictions, responses to the 2016 survey were completed by hand and sent by mail.

Completing and Validating the Survey

States respond to the EAVS using an Excel template. This Excel document includes a series of macros to help the respondent enter and review the data for errors. In 2016 another Excel template was created to allow for copying and pasting jurisdiction-level data. However, Excel is not the ideal mode to collect this amount of data from these many jurisdictions—more on that when I discuss potential improvements to the EAVS.

After states submit the data, they are reviewed for accuracy. This includes attempting to determine what any empty cells represent—data that are missing, data left blank because it is not applicable for a state (i.e. the state does not have Election Day registration and therefore has no data for this question), or a true value of zero. Or was it mistakenly left empty? Attempts are made to catch math errors as well. An example is finding an impossible value, such as a state showing it had more rejected provisional ballots than provisional ballots issued. And in 2016 for the first time more advanced statistical methods were used to see if the data fell between what would be expected of a jurisdiction based on data from previous years and the characteristics of the jurisdiction. Reports were generated and sent to each state flagging possibly problematic data and providing an opportunity for states to make changes or confirm the data is accurate.

All Challenges, Great and Small

As the previous section demonstrates, administering the EAVS is not a small task and the devil is most definitely in the details. Pulling back for a bigger-picture view, one sees these details inform the high-level challenges and opportunities for the EAVS as well.

One challenge for the field of election administration which has an impact on the EAVS is terminology and the lack of accepted common terms across the states. For example, the phrase "early voting" may mean in-person voting on a voting machine during a set time before Election Day in some states, while in others it may be casting an absentee ballot in person at an election office before Election Day. Yet, in other states, in-person absentee voting is considered a part of absentee voting. While the EAVS attempts to provide clear instructions and definitions within the survey instrument, respondents will of course bring their own definitions to the table.

Another challenge is whether the right questions are being asked and being asked in the best way possible. The survey has been essentially the same since 2008 and changing the survey cannot be done easily or taken lightly. First, changes require the federal review process noted above that must be followed any time changes to the survey are made. Second and more importantly, election officials need to be given a good deal of lead time to deal with any significant changes in order to make changes in the methods that they use to collect the data. And they need to be involved, along with survey experts, when these changes are made.

That said, there are times for review and change. In the past, a working group was created to review Section B of the survey about military and overseas voters, mostly to streamline the questions in that section. And this type of review could certainly be helpful for other sections, including Section A related to voter registration.

Another area where there is room to improve is the use of the Statutory Overview/Policy Survey. In the past it has been released separately from the EAVS. However, it provides important context to the data in the EAVS. For example, knowing about why states issue and reject provisional ballots goes a long way in understanding the variation in these data across states. In the future linking these surveys more directly or even combining them could add even more power to the EAVS data and analysis.

This leads to the last but possibly most important potential change for the EAVS—shifting from an Excel-based template to an online survey

tool. The introduction of an online data collection system could lead to more accurate data; reduce the burden and simplify the process for respondents; provide real-time error checks during data collection; allow all states but especially bottom-up states a more manageable way to share the survey at the local level; and allow for the incorporation of the Statutory Overview/Policy Survey into the EAVS, building in related legal and process questions into the appropriate sections.

Conclusion

While the EAVS faces some challenges, it is an amazing and unique source of election administration data. And every year it is issued, the survey gains power, with more data over more elections allowing for better comparisons within and between states and jurisdictions, as well as more opportunity to observe trends.

From experience I know a great deal of work goes into both managing the survey and responding to the survey. Understanding and answering all the questions, verifying the data, and providing the appropriate analysis is labor intensive and difficult. However, as the survey has already demonstrated and with these potential improvements, it is and can continue to be an invaluable resource for all those who care about the nuts and bolts of our democracy.

CHAPTER 30

Local Engagement with the Election Administration and Voting Survey (EAVS)

Susan Gill

Abstract The introduction of new data collection tools in election administration can create unique challenges for local election officials. This case presents one local election official's experience with the Election Administration and Voting Survey (EAVS) from its inception following the passage of the Help America Vote Act (HAVA) in 2002; also discussed is the important role that vendors play in ensuring that local jurisdictions provide the type of data required by the EAVS and other election administration data collection tools.

Keywords Election Administration and Voting Survey (EAVS) • Data • Vendors

My name is Susan Gill and I have been the Citrus County, Florida, Supervisor of Elections for 23 years. I have served as President of the Florida State Association of Supervisors of Elections and have chaired and served on many committees. I am currently serving as Chair of the Election

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Center (National Association of Election Officials) Board of Directors. I am the Co-Chair of the Vote Center Task Force for our State Association.

Citrus County, Florida, is a west central coastal county located approximately 1.5 hours north of Tampa and 1.5 hours west of Orlando. The population is 145,000 of which approximately 109,000 are registered voters. We are largely a retirement community comprising people who have moved to Florida from many different states. In presidential elections, 86% of the voters 61 years of age and older turn out to vote. The county has a small minority population. A federal court order requires ballots and all election related materials be printed in the Spanish language starting March 2020. The Citrus County Supervisor of Elections has nine full-time employees.

The availability of data down to the granular level through computer software programs has enabled election professionals to make more informed decisions. For example, we are able to make changes in the allocation of resources by analyzing the post-election data on when and where voters are voting. Florida law allows no excuse vote by mail, early voting, or Election Day voting at the polls, and so these differences really matter.

Analyzing the post-election data showed us that more voters were choosing to vote by mail and early vote. As a result, in 2012 we reduced the number of polling places by ten to adjust to the higher number of voters that we expected to vote prior to Election Day. Our State Vote Center Committee continues to study the numbers and methods of voting to see if our State is ready, willing, and able to move on to Vote Centers, which will require a legislative change.

Data are available real time on the numbers of voters voting at the early vote sites and at the polls on Election Day. The number of vote by mail ballots is available as the signatures are matched on the registration system. On our website, voters are able to find out the status of their vote by mail ballot: when it was mailed and when the voted ballot was received in our office.

The Help America Vote Act (HAVA) requires the Election Assistance Commission (EAC) to gather information from all the jurisdictions receiving federal funds for accountability purposes. Another survey! We had no idea what information would be asked in the survey and what data they would be requesting. We knew this was no ordinary survey. We would be required to complete the Election Administration and Voting Survey (EAVS) survey and the State Division of Elections would be responsible for making sure that all counties complied.

When the Election Administration and Voting Survey arrived we were so frustrated. We felt like crying! While some of the questions such as requests for registration numbers were straightforward, others in the vote by mail section were more confusing. The staff, our Operations Manager, the Vote by Mail Coordinator, and the Registration Administrator along with myself were all involved with gathering this information. We would look at a question and each staff member would have a different understanding and a different interpretation of what was being asked.

In addition, the Federal Voting Assistance Program (FVAP) had another survey that asked the same questions in a different way, which produced a different answer that, of course, did not match the EAVS answer to the similar question. We did not think the surveys were an effective tool.

Life is better now. The EAC has continually tried to improve the survey and make it more user-friendly. The FVAP survey questions are now included in the survey. We receive a copy of the survey ahead of time which helps us keep on top of gathering the data that will be required on the survey. VR Systems, Inc., our voter registration vendor, has also helped design the registration software to make it easier for us to access the data the way the EAVS survey requests it.

The usability of the EAVS Report is also better now. There are still areas needing improvement. To address these, the EAC and the survey developers have reached out to election officials to listen to our suggestions. One issue we have is that after the survey has been completed online, there is no way to print a copy for reference. We only have our handwritten worksheet. This is important because our office and the state office receive public records requests asking for the same information and we would like a copy of the final survey for reference.

A second issue has to do with the due date of the EAVS. The due date for the 2016 EAVS was February 2, 2017. We would like the completion date for the survey to be the end of December of the election year. This will allow us to start the new year having completed all the necessary paperwork from the previous year's election. Lastly, the information provided to complete the EAVS is not always helpful. For the 2016 survey, we were provided additional information which was not provided in the past, and some of which was redundant. Materials included *A Guide to Election Administration and Voting Survey, Statutory Overview, Guide to Using the 2016 Election Administration and Voting Survey Data Templates*, and the *Template*. Our vendor, VR Systems, Inc., was a great help in setting up their programs to easily provide the data requested. VR Systems, Inc., also used the *Suggested Guidelines for Completion of the US Election Assistance Commission 2016 Election Administration & Voting Survey.*

The EAVS is mandated by the Help American Vote Act and serves as an accountability document for Congress to review. EAVS is probably most useful to those doing research wanting to study a large segment of the national election community. For an elections official making decisions specific to our own county, much of the data we need is available through our software and elections systems. However, we do keep our EAVS data at hand for Public Records Requests and other surveys. We appreciate the continuing effort to make EAVS easier to complete. We now know better what to expect and our vendor assists with providing the data in a format as requested by the EAVS. We are constantly examining our data to evaluate the need for changes in allocation of ballots, equipment, poll workers and making decisions for the future. The State collects data from all 67 counties and makes it readily available for comparison purposes.

Data collection has come a long way during the time that I have been Supervisor of Elections. The EAVS and its improvements help illustrate how trends are changing. This type of data is essential for election officials making election administration decisions. As we become more familiar with the data that we have on hand, we will be able to improve election administration even further.

CHAPTER 31

Innovation in Synthesizing Big Data: The Electronic Registration Information Center (ERIC)

David Becker

Abstract Maintaining accurate, complete voter lists has been a significant and intractable problem. Many eligible voters are not on the lists, which can also be fraught with inaccuracies. These issues lead to major problems downstream in the elections process, and since so much of election reform is viewed through a partisan lens, the inaccuracies can lead to polarizing divisions. Bringing together a group of experts and election officials, a multistate data center was created, called the Electronic Registration Information Center, or "ERIC." ERIC delivers information on voters who have moved, while also allowing for outreach to those not yet registered. Born in 2012, ERIC has grown from 7 to 26 states and the District of Columbia, including states as red as Alabama, Louisiana, and Utah and states as blue as Connecticut, Illinois, and Oregon. The ERIC states govern ERIC, and pay the full costs of its operations, and security of all data is maintained through rigorous methods. Since its inception, ERIC has

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enabled states to update nearly 10 million out-of-date voter records, and reach out to over 34 million eligible but unregistered voters, with millions of these new voters registered.

Keywords Voter registration • Voter list maintenance • Electronic Registration Information Center • ERIC

The Idea

In 2008, I was working with the growing elections team at the Pew Charitable Trusts, as it was ramping up its efforts to improve American elections. As part of our work, we sought guidance from experts in the field. After the 2008 election, we hosted a bipartisan group of over 200 leaders in the field of elections—election officials at the state and local level, campaign staff, researchers, technologists, advocates, and others—to discuss the past historic election and possible election administration reforms going forward.

I talked to dozens of people, and asked them one simple question—if you could fix *one thing* in elections, what would it be? Remarkably, the answer was unanimous—voter registration. Those working in elections knew that the voter lists were incomplete, with large numbers of eligible voters not on the lists. They also understood the lists were fraught with inaccuracies and unable to keep up with Americans' mobility. These issues led to major problems downstream in the elections process, including returned mail, excess costs, long lines, unnecessary provisional ballots, and voter confusion and dissatisfaction. In addition, since so much of election reform was viewed purely through a partisan lens, the inaccuracies in the lists led to concerns about election integrity, and polarizing partisan divisions. We determined that if a solution to the voter list problem could be devised, it could ameliorate so many other problems in elections at the same time.

The Process

Beginning in 2009, we began to look for such a solution. I led the effort, assisted by John Lindback, the former director of elections of Oregon and Alaska, who built the statewide voter database in Oregon. We went in without preconceived notions, committed to looking for a real solution that would not be undermined by partisan polarization. We began by

creating a working group that included state and local election officials from both parties, researchers, and technical experts. We called this group the Voter Registration Modernization Design Working Group, or "VRooM DaWG" for short.[1]

At the beginning of the first convening of the group, I asked those in attendance one question—if we could create a voter registration system from scratch, how many would create the one we have now? Not one person raised their hand. We were all on the same page about the need to improve our system, and then we got started with the hard work of devising an improved system.

First, we had to define the nature of the problem. It was important to educate members of the working group, particularly those with technical expertise, who were less familiar with the nuts and bolts of election administration. Election officials from around the country agreed that the challenges of maintaining a complete voter lists included the following:

- Voters did not understand how voter registration worked, and when they had the responsibility to update their records;
- Voters were moving at high rates, with about one-third or more moving within a four-year cycle, sometimes multiple times. And those mobility rates were even higher among underrepresented populations, including the young and socioeconomically disadvantaged;
- Third party groups were exacerbating the problem, waiting until immediately before a major election, and then inundating election offices with paper voter registration forms, many of which were duplicates or illegible, leading to errors in the voters' records; and
- While citizens knew to update their address with other agencies, like motor vehicle agencies, those agencies were doing a poor job of forwarding that information in a usable way to election agencies.

One key member of the working group was Jeff Jonas, a data and entity-resolution expert, then a fellow at IBM working on cutting edge software that, as he puts it, enables "data to find data."[2] Lindback had worked with Jonas on a panel at the National Academies of Science, also looking at the issue of voter registration, and had come away impressed by

[1] https://www.pewtrusts.org/~/media/legacy/uploadedfiles/pcs_assets/2010/upgradingdemocracyreportpdf.pdf.

[2] https://senzing.com/team/jeff-jonas/.

him. When I noted that we needed someone with particular technical expertise in the field of data, John immediately recommended him, and to our delight, he accepted.

As I got to know Jonas, I soon realized he was exactly what this discussion needed—a genius about data, unbound to existing election infrastructure and vendors. Jonas sat quietly absorbing the discussions for several days, and in the middle of the second meeting of the group, as we were beginning to consider how to design a solution, he spoke up. He quietly walked to the front of the room, and showed a slide he'd been working on, outlining a rough architecture for a system that could begin to address this problem. A hush literally fell over the room for what seemed like an eternity, as we began to digest his idea, the silence was suddenly broken by a gasp from a single election official. We all could see this was the way forward. This was the moment of conception of ERIC—the Electronic Registration Information Center.[3]

Put simply, we proposed creating a multistate data center, running state-of-the-art software capable of analyzing and resolving data from multiple sources, where the states would upload data from voter files and other sources with more up-to-date information (most notably, motor vehicles files), and receive reports telling them when one of their voter records was no longer up-to-date. There would need to be sufficient data points, and multiple sources of data, to minimize the number of "false positives" (where a record was erroneously matched to another with the same name, not representing the same person), while maximizing the chance that a move, or a death, would be discovered and reported. Such a data center could deliver information on voters who had moved (within or out of state) and voters who had died. States required actionable data about this—information they could immediately and confidently use to confirm possible changes to a voter's record—without having to undertake burdensome supplemental review of that data.

The technology was cutting edge, but strange as it may sound, the technology to create such a data center wasn't the biggest challenge. There were several other challenges that needed to be resolved if ERIC was truly going to be a solution that worked for the states. Several questions arose:

[3] https://ericstates.org/.

- How would ERIC avoid the perils of being politicized, being used by partisans to feed political whims at any particular moment?
- How could ERIC obtain and protect the data it needed, which was often sensitive and protected by law?
- How could ERIC be governed in a way that was effective, nonpartisan, and transparent?

While we had the rough technical framework of ERIC by the end of 2009, consideration of these questions occupied the working group for more than two years. We began with discussing who should govern ERIC. This was a key point, as the data that ERIC required included sensitive motor vehicle data that was specially protected under both federal and state law, which could not be shared with non-governmental entities in most circumstances. Furthermore, ERIC needed to remain above the partisan fray, and to maintain a level of transparency that would keep it that way. Finally, ERIC would need staff that could dedicate time to effectively manage a complex data system, and coordinate with the member states. The group agreed that no existing entity fit all these requirements, and therefore we resolved to build a new nonprofit membership organization. The ERIC nonprofit corporation would have bylaws and a membership agreement, and be governed, with operating expenses paid, by the member states.

It was essential that the bylaws and membership agreement allowed for the states to govern ERIC effectively, but also bound all the states to a common, non-ideological set of requirements.[4] If ERIC was to succeed, the left and right could not utilize it, or be perceived to utilize it, for different purposes to meet their differing agendas. Conventional wisdom suggested that those on the left were primarily concerned with more complete voter lists (with more registered voters), while those on the right were primarily concerned with cleaner voter lists (ensuring those no longer eligible were removed). Both are important goals, and we determined that ERIC *must* achieve both to be successful. Therefore, the terms of the bylaws and membership agreement made clear that states were required to use ERIC data both for reaching out to new voters and for list maintenance to begin the process to remove records that no longer reflected an eligible voter in their state, consistent with federal law. And, importantly,

[4] https://ericstates.org/wp-content/uploads/2019/01/ERIC_Bylaws_2018-11-30.pdf.

the states would have to document their compliance with both aspects of membership in ERIC, or be automatically removed from membership.

The member states would each select a representative to serve on the board of directors (almost always the state election director) and, therefore, states were essentially, and legally, sharing data with themselves. Using a technique called one-way hashing, confidential data such as driver's license number, the last four digits of the Social Security number, and even the date of birth would be protected by scrambling that data into long strings of alphanumeric characters, unreadable by humans and nearly impossible to reconstruct.[5] The data would be stored in dedicated servers located within the United States, subject to very high physical and virtual security.

The Birth of ERIC

Thus, after over three years of analysis and planning, ERIC went live in the summer of 2012. A bipartisan group of seven "pioneer" states led the way—Colorado, Delaware, Maryland, Nevada, Utah, Virginia, and Washington. Four of these states were led by Republican election officials, with three led by Democrats. These states received their first ERIC reports, indicating millions of eligible citizens who were not registered to vote. The states contacted each of these "eligible but unregistered" citizens (or "EBUs" as ERIC calls them), with hundreds of thousands of them registering before the presidential election that year. Within several months, ERIC had a staff consisting of Lindback as executive director, a man who's forgotten more about voter list maintenance than most of us will ever know, and Ericka Haas, the brains behind Oregon's voter list and one of the nation's most knowledgeable people about the interplay between voter and Department of Motor Vehicles (DMV) data, as the ERIC Systems Engineer.

The courage of the first ERIC states, and ERIC's initial staff, really cannot be overstated. Nothing like ERIC had ever been built before. While ERIC was being built, we were often asked to analogize ERIC to something that already existed. But ERIC was the first effort of its kind—a voluntary consortium of states working together to govern and fund a sophisticated technical endeavor. The early members of ERIC didn't know for sure if it would work, or if the data would be of high quality. Similarly, the initial ERIC staff was taking a big chance. Both Lindback and Haas

[5] https://www.nytimes.com/2018/11/05/technology/unregistered-voter-rolls.html.

left comfortable jobs to take a chance on a nonprofit technical start-up. Fortunately, the planning that went into the creation of ERIC paid off, and the confidence of ERIC's early adopters was repaid in full.

How ERIC Works

As discussed earlier, when a state joins the ERIC community, they agree to several responsibilities, all designed to make ERIC effective, efficient, secure, and sustainable.

Governance and Budget

Each state agrees to help govern ERIC, by participating as a member of the board of directors, and paying for the operating expenses of ERIC. When states join, they each pay a flat, one-time membership fee of $25,000, and annually, the states contribute dues relative to the size of their population (e.g. Delaware pays less annually than Pennsylvania). Currently the annual budget of ERIC is under $1 million, paid entirely by the member states. And because ERIC's budget does not increase substantially as more states join, member states see their annual dues *decrease* over time, as the quality of data increases with more member states.

List Maintenance

ERIC provides each member state with four list maintenance reports—in-state moves (voter has a more recent address in another state record, usually motor vehicles), cross-state moves (voter has a more recent address in another ERIC state), deaths (as determined by a high-confidence match to the Social Security master death list), and duplicates (one individual has more than one record on the same state's voter list). States commit to conducting list maintenance using ERIC reports approximately annually, at a minimum (though some do it more often), and to do so in compliance with the National Voter Registration Act, which requires contact with a voter who has moved out of state prior to removal from the list.[6]

[6] 52 U.S.C. 20507. https://www.law.cornell.edu/uscode/text/52/subtitle-II/chapter-205. If a state sends a voter who has moved out of state a mailing, and that voter does not respond to the mailing, the state moves that voter to inactive status. If an inactive voter tries to vote before two federal general elections have passed, they are instantly activated and

Outreach

ERIC also provides each state with a list of "eligible but unregistered" voters, or "EBUs," who are eligible citizens who have a record in the state's motor vehicles database (or other data provided by the state) who do not have a matching voter record. Each state commits to contacting all eligible voters on this list at least once every two years, prior to the next federal general election. The first time a state does this outreach the list is substantial—roughly equaling approximately 25% of the eligible voter population in the state. Subsequent outreach is more manageable, as states are only required to contact each potential registrant once, with only new matches included in the outreach.

Documentation and Transparency

The membership agreement clearly mandates that states document and certify their compliance and outreach, and provide that information to ERIC. If a state fails to meet this requirement, they are automatically removed from membership.

Confidentiality of Private Information

Since some of the data that flows through ERIC is sensitive, the member states have gone to great lengths to protect the transmission and storage of that data. As discussed above, sensitive data goes through a one-way hashing process—*twice*—so that even the states themselves couldn't reconstitute the confidential fields (they would not need to, of course, since they've got the original source data). Moreover, the states agree not to disclose or release any of the data included in the ERIC reports unless required by a court, so that personal information is adequately protected.

ERIC Now and in the Future

ERIC is almost seven years old, and it has grown from those initial 7 states, to now include 26 states plus the District of Columbia. These include states as red as Alabama, Louisiana, and Utah, and states as blue as

allowed to vote. If they fail to vote or contact the state, they can be legally removed from the list after the second federal general election passes.

Connecticut, Illinois, and Oregon. Georgia just became the most recent state to join, and more states are poised to join prior to the 2020 election, as they have passed laws enabling their membership.

Nearly half of the eligible voter population of the United States lives in an ERIC state, and with the new states, ERIC's membership will likely exceed half of the voting population by the end of 2019. Those voters are seeing real, tangible benefits, even if they might not realize it. Voters in ERIC states are more likely to have voter records that are up-to-date, meaning fewer problems when they go to vote. In states with same-day registration, those voters are less likely to need to rely upon same-day registration to update their addresses, because the state has already updated their records. [7] And the ERIC states are seeing a reduction in costly returned mail, because voters' addresses are more likely to be accurate.[8] All this has occurred as the early members of ERIC have enjoyed a significant reduction of approximately one-third in their annual dues.[9]

ERIC has also managed transition. After serving as ERIC executive director for three years, Lindback retired, and the ERIC states conducted a search for the next executive director, hiring Shane Hamlin for the job. Hamlin was an integral part of the working group that created ERIC. As the state election director for Washington State he led many of the discussions that created the ERIC we know now, and in fact served he as the very first ERIC board chair when Washington was among the first states to join. Though ERIC has gone from a board of only 7 state members to 26 members, it has managed that transition, with virtually all votes of the board being unanimous, despite the political and regional diversity.

And the results of ERIC's strong and effective leadership have been remarkable. Since its inception, ERIC has enabled states to update their records to reflect over 7 million in-state moves that previously had gone

[7] https://electioninnovation.org/2018/03/12/minnesota-registration-errors-decline/. For instance, after joining ERIC in 2014, Minnesota saw a substantial drop in the need for same-day registration in 2016 (compared to 2012), without any drop in overall registration or participation.

[8] https://www.pewtrusts.org/en/research-and-analysis/articles/2014/10/16/eric-reduces-undeliverable-ballots-in-king-county-washington. King County, Washington, saw more than one-third reduction in returned mail after the state joined ERIC.

[9] https://ericstates.org/wp-content/uploads/2019/01/FINAL_ERIC_2017_Annual_Report.pdf.

undetected. That means over 7 million individual voters who could be contacted by election officials to inform them about their next election, what was on their ballot, where to vote, and who could vote without any hassle or delay. [10]

ERIC has identified for the states over 2.5 million records that were out-of-date because the voter had moved to another ERIC state. Those voters were contacted, and the process for cleaning those records from the lists could begin, consistent with federal and state law. Over 240,000 voters who had died since they last voted were similarly identified for the states. When states can accurately and effectively maintain their voter lists with data such as this, it significantly tones down the rhetoric around potential voter fraud, and can help foster an environment of voter confidence and security.

Finally, and perhaps most impressively, ERIC has helped its states reach out to over 34 million eligible but unregistered voters over the last several years. The data from recent elections is still being analyzed, but we know that over *5 million* of these new voters registered, and it's likely that the number is significantly higher. This is probably the single most effective voter registration effort in history, and it's all been driven by the states themselves, in a completely nonpartisan way.

ERIC isn't the only solution necessary to improve our election system. Other innovations like online voter registration, and digital automation of the motor voter process, can greatly enhance the quality and completeness of the voter lists, in conjunction with ERIC. But ERIC has proven itself to be an integral part of the solution, and its governance structure, in particular, is an innovation that may yield benefits for decades to come.

[10] https://ericstates.org/statistics/.

Appendix: The Future of Election Administration

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