Teaching Civics in the Digital Age:
The Use of Traditional and Innovative Pedagogies

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ABSTRACT

The civic education of high need students—students living in poverty, minority students, English language learners, and special needs students—often is shortchanged, contributing to a "civic empowerment gap." This study examines differences in the pedagogies employed by teachers of high need students and non-high need students, focusing on the extent to which they employ techniques that will prepare students for citizenship in the age of digital politics. The study addresses the core question: Are there differences in the pedagogies, activities, and digital media use skills teachers of high need and non-high need students employ in the classroom? Data on 700 middle and high school teachers nationwide are used to examine the question empirically. The findings support the hypothesis that teachers of high need students are less likely to incorporate digital technology into the civics classroom than teachers of students who are not high need. The disparities in the use of technology in the classroom are apparent for accessing information as well as civics-related activities. The inequities in civic education that contribute to the civic empowerment gap are growing in the digital age. Students in high need schools are not receiving civics instruction that keeps pace with the augmented requirements of engaged citizenship.

KEYWORDS: civic education, civics pedagogy, high need students, digital citizenship

Disciplinary Focus: Multidisciplinary—political science, education, communication

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The digital transformation of American society has substantial implications for civic education. The pre-college civics curriculum offers the opportunity for students to acquire competencies necessary for negotiating 21st century digital landscape. Digital technologies can be employed as tools that facilitate learning and expression. They provide mechanisms for accessing, process, creating, and conveying material. In addition, citizens now routinely employ digital affordances to participate actively in civic life. The role of preparing students to be digital citizens, and to acquire the requisite skill sets for engagement, increasingly is being shouldered by civic educators.

Yet integrating digital technology in the classroom for these dual purposes is challenging for teachers. Restricted resources, lack of professional development opportunities, limited instructional time for civics, and uncertain outcomes can hinder instructors from integrating digital media into their classes. Teachers face the additional difficulty of ensuring that students remain engaged with the lesson rather than becoming distracted by the technology.

Civic educators must ensure that they do not shortchange teaching the basics--Constitutional principles, government institutions, and political processes--in favor of pedagogic novelties. Teaching students to be digital citizens goes beyond simply using technology as an instructional tool in the classroom. It requires fundamental changes in the learning environment. It calls for an open classroom climate that fosters civil discussion and debate. It necessitates integrating digital resources into the curriculum in a manner that facilitates engagement in political life.

The need to improve civic education in the nation's middle and high schools is especially pressing for high need students. Students from higher socioeconomic status households receive more and better classroom-based civic learning opportunities than their lower SES counterparts (Kahne and Middaugh, 2008). They also have greater access to resources and quality programs to enhance their learning experiences outside the classroom. By some accounts, students from higher-income areas are served by more effective teachers than students in low-income neighborhoods (Murnane and Steele, 2007).

Disparities in educational opportunities widen the "civic empowerment gap"—where political influence is concentrated among more privileged groups—by providing substandard civics preparation to students most in need of the knowledge, skills, and the dispositions required to participate competently and responsibly in political life (Levinson, 2010, 2012). The "civic empowerment gap" may be widening in the digital era, as the requirements for effective citizenship have broadened (Bennett, 2008; Bennett, et al., 2009; Dalton, 2008). With less access to civics instruction that meaningfully incorporates digital citizenship than their more advantaged counterparts, high need students may be further deprived of the skills required to develop political agency.

This paper assesses the extent to which middle and high school teachers are employing traditional and digital instructional approaches in the civics classroom. Specifically, the study examines whether there are differences in access to instruction conducive to conveying digital citizenship orientations between high need students and those who are advantaged. The paper begins with an examination of the challenges faced by teachers seeking to incorporate digital pedagogies into the civics curriculum, especially those teaching in high need schools. It then examines the instructional strategies that civics teachers are using in the classroom in middle and

high school, and addresses the question: How are teachers integrating pedagogies related to digital citizenship into the curriculum? Finally, the study addresses the research question: Are there differences in the extent to which teachers of high need students and teachers of more advantaged students incorporate digital pedagogies, activities, and media use skills in the classroom? I use data from a nationwide 2015-16 study of civics, social studies, and American government teachers to assess these issues empirically.

The Challenges of Educating for Digital Citizenship

Active citizenship in the twenty-first century requires digital age skill sets, as technology has instigated an expanded realm for civic engagement (Kahne, Middaugh, and Allen, 2015; Wells, 2015; Gainous and Wagner, 2014). Citizens must be able to access information from diverse digital platforms, including news sites, government sites, blogs, and social media affordances. They must be able to evaluate the quality of the information derived from these platforms even as the news environment becomes increasingly muddled and "fake news" proliferates. In addition to monitoring information, the public now has the opportunity to engage actively in the political process through new media venues. Citizens can contribute to political discourse by providing eyewitness accounts of events, offering commentary, and responding to posted content. They can create political sites and produce videos. They can write, circulate, and sign petitions, and register their opinions via online polls. They can contact public officials using digital platforms. They can recruit volunteers for community and political activities, raise money for candidates and causes, and engage in protests.

People who acquire the competencies for digital civic engagement have an advantage in their ability to express their views, participate in the political realm, and advocate for causes they believe in. Incorporating digital media skills into the middle and high school civics, social

studies, and American government curriculum is a logical step in the making of competent digital citizens. However, civics instruction for the making of good digital citizens lags behind the shifts in the political environment (Owen, et al., 2011; Owen, 2014; Owen, Doom, and Riddle, 2016). The situation is most dire for high need students, whose access to high quality civics instruction is already constrained (Levinson, 2010). High need students may lose further ground to more advantaged students in the acquisition of civic knowledge, skills, dispositions, and behavior, thus widening the civic empowerment gap.

From Digital Natives to Digital Citizens

Today's students are digital natives whose lives are fully immersed in technology (Palfrey and Gasser, 2008; Mihailidis, 2014; Cunningham, 2007; Shah and Abraham, 2009). Young people have more advanced technological skill sets than prior generations, and often are more adept at using digital media than their teachers (Celano and Neuman, 2013; Hodgin, 2016). Digital natives use new avenues to engage, as social media allow them to align the information they gather from peer-to-peer networks to the political information they encounter through media outlets that foster conversation and the spread of information (American Press Institute, 2015). However, a gap exists between young people's understanding of digital media as social tools and their potential for gaining political information and taking part in civic life. Young people may feel adequately equipped to cultivate social networks, but they must learn how these same information sources and network platforms can be used for meaningful political engagement (Mihailidis, 2014; Bennett, 2012).

Teachers can capitalize on students' pervasive use of digital media by developing pedagogies that foster digital citizenship skills. They can provide guidance to students as they become critical consumers of online news and information about government and politics.

Teachers can provide direction to students about how to be responsible users of social media for engaging in political dialogue and action. They can devise methods for adapting well-established civics classroom activities, such as writing letters to public officials, to the digital environment.

Digital Civics Instruction

An increasing number of schools are providing civic education that incorporates digital instructional components, including schools serving high need students (Duncan and Murnane, 2011). At the same time, there are serious challenges to going beyond the use of digital tools to look up information. Restricted resources, lack of technology-related teacher professional development opportunities, limited instructional time for civics, the volatility of the media environment, and uncertain outcomes can preclude schools from meaningfully integrating digital media for the development of civic dispositions and skills into classes. All of these limiting factors are particularly relevant for schools serving high need populations.

Research has demonstrated that influence of teacher quality on student performance is more important than the race or class of students or school characteristics (Nye, Konstantopoulos, and Hedges, 2004; Rivkin, Hanushek, and Kain, 2005). Some studies indicate that high need students are disproportionately assigned to teachers with the least preparation, the weakest academic records, and the fewest resources at their disposal (Murnane and Steele, 2007). However, a 2016 report by the U.S. Department of Education suggests that although high income students have greater access to effective math and English/language arts teachers than low income students, the differences are small (Isenberg, et al., 2016). It may well be the case that teacher quality is similar across schools, but resource restrictions and lack of technology-related professional development opportunities are more likely to affect teachers of high need students.

Resource limitations inside and outside of school deter teachers of high need students from incorporating digital technology into the curriculum for more than rudimentary purposes. The digital divide in high need schools exacerbates the achievement gap between high need and advantaged students (Celano and Neuman, 2013), and ultimately contributes to the civic empowerment gap. Schools serving high need students find their resources are increasingly stretched as the demand for technology in the classroom has grown. Technology in high need schools is frequently outdated, not functioning, or completely lacking, even as the cost of digital devices has dropped. High need schools frequently do not have the resources to hire technicians to install and maintain equipment.

Even when high need students have access to technology in the classroom, their ability to use computers for homework and school projects is often limited. Only a small percentage of students from low-income families have computers or broadband connections in the home. They must rely on technology in libraries, after-school programs, and other public facilities where time limitations are imposed and the equipment can be outmoded and in disrepair from heavy use. Teachers find it difficult to make assignments that involve using technology when students are not able to complete them due to access issues (Duncan and Mernane, 2011; Celano and Neuman, 2013).

Growing income inequality has exacerbated the gaps in access to educational and technological resources between low-income and middle to high-income families. Students from different socioeconomic groups often are isolated from one another as they live apart and attend separate schools, resulting in divergent educational experiences and outcomes. Parents of more advantaged students can provide technological devices in the home and enrichment opportunities

outside of school, such as camps and private lessons, which are not an option for high need families (Duncan and Murnane, 2014).

Teachers almost universally believe that technology is essential in the classroom, but lament the paucity of technology-related professional development opportunities (Hodgin, 2016). A study conducted by the Center for Information & Research on Civic Learning and Engagement (CIRCLE) found that the overwhelming majority of instructors felt that teaching media literacy is essential for students to become effective consumers and sharers of information in the political sphere (Kawashima-Ginsberg, 2014b). However, just one-third of civics teachers felt "very confident" in covering media literacy in the classroom. Teachers had difficulty finding quality materials related to civics instruction involving digital media. Only 39% of respondents were aware of good resources "to teach students how to sort fact from fiction in a digital age" (Godsay and Sullivan, 2014: 6). 80% of teachers indicated that they were at least somewhat interested in having more resources for teaching media literacy (Kawashima-Ginsberg, 2014a). Digital civics instruction, much like the digital environment itself, becomes quickly outdated. It can be difficult for educators to keep pace with shifting trends. Thus, as Hodgin suggests, "Educational efforts that combine digital literacy development alongside of civic learning are key to fully preparing youth for participation in the digital age" (2016b: 3).

Educators must ensure that pedagogic novelties do not compromise students' learning of the basics about Constitutional principles, government institutions, and American political processes, such as voting. Instructors increasingly find themselves competing with technological devices for students' attention. They are challenged to develop instructional strategies that keep students engaged with the lesson. There is some reluctance among educators to depart from well-established pedagogies and adopt digital approaches. As Duncan and Munane observe,

"even hard-working, well-intentioned educators (like most adults) are slow to embrace change" (2014: 2). Integrating technology in the classroom requires teachers to devote greater time to assisting individual students working independently on devices. With limited time available for civic education, teachers are more inclined to use pedagogies that involve the entire class more inclusively (Hodgin, 2016a).

The nature of the online environment also poses unique challenges for teachers wishing to incorporate digital practices into their classrooms. While the digital communication offers students the opportunity to become acquainted with multiple issue perspectives and to participate in the civic discourse, the "anything goes" atmosphere can be difficult to navigate. Rather than exposure to civil discussions of differing viewpoints, students can become enmeshed in "echo chambers," exposed to misinformation, and involved in vitriolic exchanges that can escalate into conflicts. Students can be put off if their efforts at online engagement do not produced the desired response or gain sufficient attention (Hodgin, 2016b; Kahne, Hodgin, and Eidman-Aadahl, 2016). In addition, teachers may face push-back from parents are reluctant to have their children exposed to unfamiliar audiences online.

Hypotheses

In light of these observations about the potential gap in access to digital instruction in the civics classroom, this study tests the following hypotheses:

H_1: Teachers of high need students are less likely to incorporate digital technology into the civics classroom than teachers of students who are not high need.

H_2: The gap in technology use in the civics classroom between teachers of high need and non-high students will be greater for active learning approaches than for accessing information.

Data

This study examines the research questions empirically using data collected in conjunction with the James Madison Legacy Project (JMLP), a nationwide program designed to provide professional development (PD) to teachers of high need students.[1] The program is implemented by the Center for Civic Education (CCE), and is based on the *We the People: The Citizen and the Constitution* (WTP) curriculum.

The data used in this study were collected on the first cohort of teachers taking part in the JMLP during the 2015-16 academic year. Middle and high school civics, social studies, and American government teachers took part in the JMLP. Surveys measuring teachers' civic knowledge, instructional goals, teaching methods, and self-efficacy were administered online before and after they received the JMLP PD. The surveys were proctored to preclude teachers from looking up the answers to the knowledge items. The present analysis employs pretest data collected prior to the JMLP intervention. A total of 562 JMLP teachers and an additional 53 control teachers who did not go through the JMLP program took the pretest for a total of 700 survey respondents. The control teachers are from the same population as the JMLP teachers, and there are no statistically significant differences in civic knowledge, instructional goals, teaching methods, and self-efficacy between the JMLP and the control group on the pretest (Owen, Schroeder, and Riddle, 2016). Therefore, all 700 respondents are included in the analysis.

The majority of the schools enrolled in the JMLP serve high need students. The U.S. Department of education defines high need students as "students at risk of educational failure or

[1] The JMLP is funded by a Supporting Effective Educator Development (SEED) grant from the U.S. Department of Education. James Madison Legacy Project: Professional Development for Teachers of Civics and Government. PR/Award Number U367D150010

otherwise in need of special assistance and support . . ."[2] The JMLP focused on recruiting teachers from schools identified as high need based on their Title I[3] status and/or whether 30% or more of their students were: 1) provided with free or reduced cost lunches, 2) living in poverty, 3) homeless or in foster care, 4) disconnected or migrant youth, 5) incarcerated youth, 6) served by rural local educational agencies, 7) minority students, 8) English Language Learners, 9) far below grade level, and 10) students with disabilities. However, a number of teachers participating in the JMLP were not associated with schools meeting any of the high need criteria. As a result, we are able to make a comparison between teachers of high need and non-high need students. The data set includes 619 teachers of high need students and 81 teachers from schools that do not serve high need student populations. Almost all of the participating schools (97%) are public. The schools are evenly divided between rural (33%), suburban (32%), and urban (35%) locations.

Measures

The teachers were asked questions about the specific pedagogies they employed in their civics classes, activities they incorporate into their courses, and their integration of digital media into the curriculum. Pedagogies, activities, and use of digital media are the dependent variables in the study. Whether or not a teacher instructs in a high need school or not is the main independent variable of interest. Controls for grade level, the number of years a teacher has been in the classroom, and teacher's highest level of education are taken into account in the analysis.

[2] U.S. Department of Education. (2016). *Definitions*. "High-needs students." http://www.ed.gov/race-top/district-competition/definitions

[3] Meeting the provision of the U.S. Department of Education's Title I program for Improving the Academic Achievement of the Disadvantaged. http://www2.ed.gov/policy/elsec/leg/esea02/pg1.html

Dependent Variables

Teachers in the study indicated if they regularly used thirteen pedagogies that are classified into three groups: 1) basic pedagogies, 2) research, and 3) projects. Basic pedagogies consist of lecture, Socratic Method, reading out loud, reading silently, class discussion, group discussion, and homework. The research category takes into account Internet and library research. Projects distinguishes between digital projects and individual, group, and class projects without a digital component.

The respondents were asked to indicate activities that they incorporate in their classes. The activities are divided into three categories: 1) digital activities, 2) classroom activities, and 3) community activities. Digital activities include having students use social media in their class work and using digital tools to create civics materials, newsletters, videos, or websites. Classroom activities consist of mock elections, moot court, simulated congressional hearings, student speeches, debates, participating in a civics competition, putting on a play, and designing and/or taking part in a survey. Community activities involve students writing and/or circulating a petition, writing letters to government officials, meeting with government officials or community leaders, attending community meetings, and taking field trips to government or historic sites. All of these community activities occur offline.

The survey asked the teachers if they used social media as part of their civics instruction. These items were placed into two categories based on whether social media was used primarily to gain information or for engagement. The information variables asked teachers to indicate if they have students access online news sites, use government websites and other e-government resources, and use campaign websites, such as political party and candidate sites. The engagement items include having students use social media to contact government officials using

digital tools, share their thoughts, ideas, and other classwork via a digital platform, create social media posts, such as posts to Facebook, Twitter, or other platforms, and create and post video content online.

Independent Variables

The study distinguishes between teachers who work in high need schools and those who do not. The variable is coded 1 for high need school and 2 for non-high need school. Some caveats about the use of the high need/non-high need distinction between the schools in this analysis are in order. The teachers of high need students come from schools that encompass the qualifying criteria identified by the U.S. Department of Education. They all come from Title I school districts, and 30% or more of the students receive a free or reduced cost lunch. The majority of the high need schools have a high percentage of students living in poverty and minority students. The small number of non-high need schools in the sample does not represent the range of schools in this category. They are more likely to reflect schools serving lower to middle rather than higher socioeconomic status constituencies even if they do not meet the formal criteria for being classified as high need. There are no elite schools in the sample. The disparity in the sample size between the high need (n=619) and non-high need (n=81) teacher groups, while large, should not be an issue in the analyses presented here (see Crone and Finlay, 2012).

Three additional independent variables are included in the analysis—teachers' instructional grade level, their years of teaching, and their highest degree. 42% of the teachers in the study taught middle school (coded as 1) and 58% taught high school (coded as 2). In a small number of cases, teachers instructed both middle and high school students; these teachers were classified as high school educators. The number of years of teaching experience was recorded for each respondent. The average number of years in the classroom was 11.7 years and the

median was 10 years.[4] Finally, a measure of the teachers' level of education—the highest degree they have earned—is taken into account. 40% of the teachers have a bachelor's degree (coded as 1) and 60% have a graduate degree (coded as 2). The vast majority of the teachers with graduate degrees hold a Masters. Less than 2% of teachers in the study have law or doctoral degrees.

Findings

The analysis begins by comparing the percentage of teachers of high need and non-high need students who incorporate the three types of pedagogies, the three categories of activities, and the two forms of digital media use in their classrooms. Separate analyses are performed for middle and high school teachers. Next, I perform binary logistic regression analyses to determine if school type, grade level, and teacher factors are significant predictors of the pedagogy and activities items that involve digital technology and all of the digital media use indicators. The independent variables in the logistic regression analyses are high need/non-high need school, grade level (middle or high school), years of teaching experience, and teachers' highest degree earned (bachelor's/graduate degree).[5]

Pedagogies

The pedagogies analysis examines the extent to which traditional and digital instructional methods are employed by teachers of high need and non-high need students. As Table 1 demonstrates, there are few discernable differences in basic pedagogies employed in high need and non-high need classrooms in middle and high school. Teachers of both types of students are highly inclined to employ established instructional strategies that include lecture, the Socratic

[4] The analysis was replicated using the number of years teaching civics. The trends remained consistent with the findings using the number of years of overall teaching experience.

[5] Models incorporating variables for teachers who instruct special populations, including English language learners, adult learners, incarcerated students, and special education studies were run. These variables were not statistically significant in the models.

Method, reading out loud, reading silently, class discussion, group discussion, and homework. The only statistically significant finding is that a higher percentage of middle school teachers of high need students (88%) lecture their students than teachers of non-high need students (76%).

Table 1
Pedagogy Regularly Used in Classroom
by Grade Level and High/Non-High Need Students

	Middle School			High School		
	High Need	**Non-High Need**	**χ^2 Sign.**	**High Need**	**Non-High Need**	**χ^2 Sign.**
Basic Pedagogies						
Lecture	88%	76%	.04	93%	98%	n.s.
Socratic Method	52%	59%	n.s.	69%	70%	n.s.
Reading Out Loud	78%	71%	n.s.	63%	63%	n.s.
Reading Silently	75%	71%	n.s.	68%	61%	n.s.
Class Discussion	99%	97%	n.s.	98%	100%	n.s.
Group Discussion	92%	95%	n.s.	94%	95%	n.s.
Homework	76%	74%	n.s.	83%	78%	n.s.
Research						
Internet Research	80%	95%	.02	86%	96%	.08
Library Research	37%	53%	.05	41%	49%	n.s.
Projects						
Digital Projects	48%	77%	.00	56%	65%	n.s.
Individual Projects	81%	90%	.18	85%	86%	n.s.
Group Projects	79%	90%	.15	86%	93%	.17
Class Projects	45%	42%	n.s.	51%	37%	.08

n=700

Teachers are much more inclined to have their students conduct Internet research (85%) than library research (41%). A smaller percentage of high need students (81%) than low need students (96%) conduct research online in their civics classes; the difference is statistically significant ($p \leq .01$). The gap is similar for library research, with only 38% of teachers of high need students using the library compared to 52% of their non-high need counterparts, and is statistically significant ($p \leq .01$). The findings are more pronounced for middle school students than for high school students. Internet research is part of the civics curriculum for 80% of the

classes of high need middle school students compared to 95% of the classes of students who are not high need. Library research is conducted by 37% of high need middle school students as opposed to 53% of non-high need students. The gap favoring non-high need students exists at the high school level, but it is not statistically significant for either type of research.

Teachers were asked if they regularly had students work on digital projects as well as individual, group, and class projects that did not have a digital component. (See Table 1.) The gap in the propensity for teachers of high need students (51%) and low need students (71%) to use digital projects as an instructional pedagogy is large and statistically significant ($p \leq .01$). The difference in assigning digital projects is large and statistically significant ($p \leq .01$) for middle school students, as 48% of high need teachers regularly make use of digital projects compared to 77% of non-high need teachers. While there is a nine percentage point gap at the high school level, the difference is not statistically significant. Middle school teachers of high need students are less likely to assign individual or group projects than non-high need teachers. The difference approaches statistical significance. At the high school level, teachers whose students are not high need are more likely to assign group and class projects than teachers of high need students.

Binary logistic regression analyses were run for the dependent variables of Internet research and digital projects. As Table 2 indicates, the high need school variable is the strongest predictor of Internet research and whether students were assigned digital projects in their civics class. In each equation, the relationship is statistically significant at $p \leq .01$. High school students were significantly more likely to do Internet research than middle school students. The teacher-specific independent variables—years teaching and highest degree earned—are not significant predictors of Internet research. However, teachers holding advanced degrees are more likely to

assign digital projects than those with a bachelor's degree. Grade level and years of teaching experience are not statistically significant predictors of digital projects.

Table 2
Binary Logistic Regression Analyses of Internet Research and Digital Projects

	Internet Research	Digital Projects
High Need School	1.290[a]	.729[a]
Grade Level	.379[b]	.195
Years Teaching	·023	.013
Highest Degree	.222	.296[b]
Wald Significance	.00	.00
Cox & Snell R^2	.02	.03
Nagelkerke R^2	.04	.04
% Correctly Classified	85%	58%
n	700	700

[a]p≤.01; [b]p≤.05; [c]p≤.10

Activities

In general, teachers of high need students are less likely to incorporate activities involving digital media into their classrooms than teachers of students who are not high need. Social media-related activities were introduced into 39% of high need classrooms compared to 47% of non-high need classrooms, although the difference is not statistically significant. 34% of teachers of high need students and 51% of non-high need teachers had their students use digital tools to create civics materials, newsletters, videos, or websites. The difference is statistically significant (p≤.01). As Table 3 indicates, there is no meaningful difference in social media activities for middle school students. However, social media activities were incorporated in 47% of high need high school classrooms and in 63% of classrooms of non-high need students, a statistically significant difference of sixteen percentage points. There are significant differences in the use of digital tools to create civics materials between teachers in high need and non-high need schools at both the middle and high school levels. 32% of high need middle school

teachers had students create digital civics materials compared to 48% of non-high need students' teachers. Similarly, 38% of high need and 54% of non-high need teachers incorporated making digital civics materials into their classrooms.

A higher percentage of non-high need teachers incorporated in-class activities into the civics curriculum than high need instructors. In middle school, there are statistically significant differences favoring non-high need students for holding mock elections, moot court, and simulated congressional hearings as well as for taking part in a civics competition. The gap between the high need and non-high need conditions is especially stark for moot court, with 8% of teachers of high need students holding moot court compared to 40% of teachers whose students are not high need. Congressional hearings were held in 10% of high need classrooms versus 42% of non-high need classrooms. The difference is somewhat smaller for holding mock elections and civics competitions. The disparities between high need and non-high need classrooms in holding mock elections and moot court persist at the high school level. 39% of high need teachers hold mock elections compared to 56% of non-high need teachers. Moot court is a curricular activity for 22% of teachers of high need students and 35% of teachers in non-high need schools. Finally, high need teachers are less inclined to have students give speeches in class than non-high need teachers in both middle and high school.

In contrast to the findings for digital and class activities, there are few significant differences between the high and non-high need groups for community activities. High need middle school classes are somewhat less likely than non-high need classes to meet with public officials. Writing letters to public officials is less often part of the high school civics curriculum for high need students (48%) than for non-high need students (61%).

Table 3
Activities by Grade Level and High/Non-High Need Students

	Middle School			High School		
	High Need	**Non-High Need**	**χ^2 Sign.**	**High Need**	**Non-High Need**	**χ^2 Sign.**
Digital Activities						
Use Social Media	31%	29%	n.s.	47%	63%	.05
Digital Materials	32%	48%	.05	38%	54%	.01
Class Activities						
Mock Election	34%	45%	.10	39%	56%	.03
Moot Court	8%	40%	.00	22%	35%	.05
Hearings	10%	42%	.00	22%	19%	n.s.
Student Speeches	52%	68%	.05	57%	67%	.10
Debates	71%	79%	n.s.	83%	86%	n.s.
Competition	7%	16%	.08	18%	23%	n.s.
Plays	41%	45%	n.s.	23%	23%	n.s.
Surveys	32%	26%	n.s.	41%	49%	n.s.
Community Activities						
Petition	14%	13%	n.s.	19%	27%	n.s.
Letters to Officials	30%	29%	n.s.	48%	61%	.01
Meet Officials	19%	29%	.15	36%	44%	n.s.
Attend Meetings	7%	11%	n.s.	20%	21%	n.s.
Field Trips	35%	42%	n.s.	38%	42%	n.s.

n=700

Logistic regression was performed for the two activities that involve digital media—using social media for class activities and creating civics materials using digital tools. As Table 4 indicates, teaching in a high need school is not a statistically significant predictor of using social media in the classroom. The largest coefficient is associated with high school grade level; the relationship is statistically significant ($p \leq .01$). Teachers who have a graduate degree are more likely to have students engage in social media-related classroom activities than those with a bachelor's degree. Being a teacher of high need students is the strongest indicator of creating digital civics content. The relationship is statistically significant at $p \leq .01$. Having a graduate degree is also a significant predictor ($p \leq .01$) of creating digital materials in the classroom.

Table 4
Binary Logistic Regression Analyses of Activities That Use Social Media and Digital Materials

	Use Social Media	Digital Materials
High Need School	.277	.588[a]
Grade Level	.742[a]	.229
Years Teaching	-.002	-.011
Highest Degree	.267[c]	.431[a]
Wald Significance	.00	.00
Cox & Snell R^2	.04	.02
Nagelkerke R^2	.05	.03
% Correctly Classified	60%	63%
n	700	700

[a]p≤.01; [b]p≤.05; [c]p≤.10

Use of Digital Media

Disparities in the use of digital media in the civics classroom are apparent for accessing information and engagement. The differences between the high need and non-high need conditions are most evident for middle school students. Lower percentages of high need teachers use digital media in the classroom for accessing information than non-high need teachers, a finding that is consistent across all three variables. Over 80% of teachers make use of online news in the classroom. Teachers in high need middle schools (79%) are significantly less likely to incorporate online news into the curriculum than teachers in non-high need middle schools (92%). While a higher percentage of high need teachers than non-high need teachers at the high school level have students use online news in the classroom, the difference is not statistically significant. Using government and campaign websites is more evident in non-high need civics classes than high need classes. The finding is most obvious for the use of campaign websites in middle school, where there is a twenty percentage point difference between teachers in high need (25%) and non-high need schools (45%). The difference is statistically significant

at p≤.01. The disparity in the use of campaign websites is high school is twelve percentage points, and approaches statistical significance.

Table 5
Digital Media Use in Classroom by High/Low Need Students

	Middle School			High School		
	High Need	**Non-High Need**	**χ^2 Sign.**	**High Need**	**Non-High Need**	**χ^2 Sign.**
Information						
Online News	79%	92%	.03	88%	81%	n.s.
Government Sites	35%	50%	.08	64%	72%	n.s.
Campaign Sites	25%	45%	.01	55%	67%	.09
Engagement						
Share Online	47%	69%	.01	56%	56%	n.s.
Social Media	10%	24%	.01	27%	35%	n.s.
Contact Officials	9%	24%	.01	32%	49%	.02
Post Videos	10%	21%	.05	22%	23%	n.s.

Teachers in high need and non-high middle schools differ in their propensity to have students use digital media to engage with others. (See Table 5.) 47% of high need teachers in middle schools have their students share their thoughts, ideas, and other classwork via a digital platform compared to 69% of non-high need teachers. 10% of high need middle school teachers and 24% of non-high need teachers have students create social media posts, such as posts to Facebook, Twitter, or other platforms. 9% of teachers in high need middle schools have students contact government officials using digital tools as opposed to 24% in non-high need schools. All of these differences are statistically significant at p≤.01. Similar differences exist for creating and posting video content online (significant at p≤.05). The only significant variation at the high school level is for contacting officials. 32% of high need and 49% of non-high need teachers have students contact public officials using digital platforms.

Logistic regression analyses were run for all of the digital media use variables. Table 6 depicts the findings for the accessing information items. Teachers in non-high need schools are

significantly more likely to use government and campaign websites than teachers in high need schools. However, the high need school variable is not a significant predictor for online news. Grade level is the strongest indicator for all of the accessing information variables, as high school teachers are more likely than middle school teachers to have students use online news, government websites, and campaign websites. Teachers with a graduate degree are more inclined to have students use digital media for access information than teachers with a bachelor's degree. Years of teaching experience has no influence on the dependent variables.

Table 6
Binary Logistic Regression Analyses of Digital Media Use for Accessing Information

	Online News	Government Sites	Campaign Sites
High Need School	.191	.424[b]	.644[a]
Grade Level	.431[b]	1.094[a]	1.209[a]
Years Teaching	-.014	.004	.006
Highest Degree	.333[c]	.190	.320[b]
Wald Significance	.00	.03	.00
Cox & Snell R^2	.01	.08	.10
Nagelkerke R^2	.02	.10	.13
% Correctly Classified	84%	63%	64%
n	700	700	700

Table 7 displays the findings for the use of digital media in the civics classroom to engage with others. High need school is a statistically significant predictor in the expected direction of contacting officials, sharing ideas and content online, and posting social media content. The relationship between high need school and creating and posting videos is not statistically significant. High school grade level is the strongest indicator of contacting officials, social media, and posting videos, and is statistically significant at $p \leq .01$ in all of these equations. Having an advanced degree is significantly related to posting videos, but is not significant for the other engagement variables. Years of teaching experience has no association with any of the measures of digital engagement.

Table 7
Binary Logistic Regression Analyses of Digital Media Use for Engagement

	Contact Officials	Share Online	Social Media	Post Videos
High Need School	.803[a]	.395[b]	.600[a]	.330
Grade Level	1.389[a]	.227	1.132[a]	.687[a]
Years Teaching	.019	-.005	-.028	.019
Highest Degree	.111	.112	.094	.395[b]
Wald Significance	.00	.07	.00	.00
Cox & Snell R^2	.09	.01	.06	.03
Nagelkerke R^2	.13	.01	.08	.05
% Correctly Classified	76%	58%	79%	82%
n	700	700	700	700

Discussion and Conclusion

The foregoing analysis supports the hypothesis that teachers of high need students are less likely to incorporate digital technology into the civics classroom than teachers of students who are not high need. The findings are statistically significant and in the expected direction for all of the technology-related pedagogy variables (having students conduct Internet research and work on digital projects), activities variables (having students engage in class activities using social media and create digital civics materials), and all of the digital media use items. Teachers of high need students are not as inclined to have their students access online news, government websites, and campaign websites as their counterparts whose students are not high need. The civic education experience of high need students also is less likely to include digital active engagement exercises, such as contacting officials via digital platforms, sharing content online, using social media to engage with others, and posting civics-related videos.

The disparities between the high need and non-high need conditions generally, although not universally, are more apparent at the middle school as opposed to high school level. This trend may reflect the fact that middle school social studies often is given lower priority than the

high school curriculum (Vontz and Nixon, 1999; Voight and Torney-Purta, 2013). For high need schools, the middle school civics curriculum may be even less of a priority than in more advantaged schools, and integrating digital instructional methods may be more difficult to accomplish.

Evidence supporting the hypothesis that the gap in the integration of technology in high need versus non-high need classrooms will be greater for activities and engaged learning exercises than for accessing information is less compelling. The gaps between technology use in high need and non-high need schools persist across the board. The vast majority of teachers—over 80%—have their students access information via the Internet. However, there is a significant difference in the percentage of high need versus non-high need teachers who assign Internet research. The differences in accessing information from online news, government, and campaign websites based on school type are substantial. Disparities in the use of digital technologies for civics activities and engagement are similarly vast.

Studies have suggested that teachers tend to fall back on the pedagogies with which they have experience, especially when faced with the types of challenges presented by the incorporation of technology in the classroom (Munane and Steele, 2007; Hodgin, 2016b). There are few differences in the traditional pedagogies employed by teachers of high need and non-high need students in middle or high school. The one significant finding—that teachers of high need students are more inclined to lecture than their non-high need counterparts—points to high need teachers employing more passive learning approaches in their classrooms. While there are no significant variations in engagement in community activities based on school type, teachers of high need students are not as inclined to have their students engage in class activities, such as mock elections, moot court, simulated congressional hearings, and speeches, as their non-high

need counterparts. These types of activities require greater effort and commitment to successfully implement than lecturing and other more passive pedagogies.

The results of the logistic regression analyses provide additional support for the contention that teachers in high need schools are less likely to employ digital technology in the classroom than teachers of non-high need students. The school type variable is statistically significant in eight of the eleven equations, and is the strongest predictor of Internet research, digital projects, digital materials, and sharing work online. Grade level also is an important predictor, as high school teachers were more inclined to incorporate digital learning into the curriculum than middle school teachers. Teachers holding an advanced degree were more inclined than those with a bachelor's degree to use digital projects, social media projects, digital materials creation, online news use, and posting videos in their classes. Years of teaching experience is a weak and non-statistically significant variable in every equation.

It is useful to take into account the fact that the non-high need schools in the sample, although they do not meet the designated high need criteria, are from lower to middle-income school districts and do not include elite institutions. It is plausible that the differences in the incorporation of digital technology that we find based on the school characteristics in this study may be amplified if schools from high socioeconomic status districts or elite institutions are considered.

The evidence here suggests that the inequities in civic education that contribute to the civic empowerment gap are growing in the digital age. Students in high need schools are not receiving civics instruction that keeps pace with the augmented requirements of engaged citizenship. The challenges for schools that are resource strapped are difficult to address. Still, there is a compelling need for schools to provide and maintain the technological affordances

conducive to digital civic education. Teacher professional development that prepares civic educators to integrate digital literacy and civics basics is essential.

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