

Teaching Civics to High-Need Students

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The civic education background of students attending colleges and universities varies greatly across campuses. Some students arrive with a strong education in civics having taken well-formulated classes with active learning components that promote civic engagement. Others, often from less privileged backgrounds, arrive with little formal civics instruction. Thus, it is important for educators at institutions of higher learning to understand the parameters of students' middle and high school civic education to inform the development of effective civics curricula that meet the particularized needs of their classes.

Middle and high school civics teachers of high-need student populations—students living in poverty, minority students, homeless students, English language learners, and special needs students—face considerable challenges. Schools serving high-need students typically have limited instructional resources; teachers lack specific training in educating high-need students; and elevated numbers of students are at risk of academic failure (Kahne and Middaugh, 2008; Murnane and Steele, 2007; Jamieson, 2013). Further, the “mismatch” between the experience and background of instructors and the student populations they teach can impede the learning process (Ross, 2016). In many cases, scant time is devoted to civics and social studies instruction in schools with high concentrations of high-need students.

The paper is an exploratory study that addresses the following research question: How effective are the pedagogies teachers employ in the classroom in promoting high-need students' acquisition of civic knowledge? In prior research, I found that teachers of high-need students are more likely to lecture, and less inclined to use active learning pedagogies, in the classroom than teachers of more advantaged students. They also are less likely to employ digital pedagogies that are conducive to 21st century political engagement (Owen, 2017). This study delves deeper into these trends by identifying specific pedagogies that are most and least effective for imparting civic knowledge to high-need students. Teaching approaches ranging from basic pedagogies, such as lecture and the Socratic Method, to active pedagogies conducive to the development of digital skills relevant to present-day politics are considered. The empirical analysis matches data on teachers' pedagogical approaches in their civics classes with their students' content knowledge outcomes.

The study has a particular focus on teaching methods that are central to the *We the People: The Citizen and the Constitution* (WTP) curriculum. Data were collected in conjunction with the James Madison Legacy Project, a program that provides teachers of high-need students in middle and high school with professional development to enhance their classroom civics instruction by implementing WTP in their classrooms. Teachers in the program received training in the pedagogies associated with the WTP curriculum. A goal of this study is to assess the extent to which WTP pedagogies are effective in promoting student civic knowledge gain.

Teacher Knowledge, Pedagogy, and Student Outcomes

It is oft-stated that knowledge of government and politics is a core competency for good democratic citizenship. Empirical research supports this emphatic statement. A basic understanding of American founding principles, the tenets of the U.S. Constitution and Bill of Rights, and the workings of government institutions is essential to individuals making informed civic judgments (Galson, 2001; Niemi and Junn, 1998). Citizens who are politically informed

are inclined to be supportive of democratic values, such as liberty, equality, and political tolerance (Finkel and Ernst, 2005; Galston, 2004; Brody, 1994; Youniss, 2011; Persson, et al., 2016). The acquisition of political knowledge encourages the development of reasoned political attitudes that transcend pure impassioned sentiments and recognize the complex nature of the political system. Knowledgeable citizens are more politically efficacious; they have the confidence to participate more fully in political life by voting, engaging in community life, and taking part in governmental affairs (DelliCarpini and Keeter, 1996; DelliCarpini, 2005; McDevitt and Chaffee, 2000; Meirick and Wackman, 2004; Campbell, 2005; Campbell, 2006; Milner, 2010; Campaign for the Civic Mission of Schools, 2011). Active citizenship in the 21st century also requires knowledge of how to navigate the digital terrain for politics, as technology has instigated an expanded realm for civic discourse and engagement (Kahne, Middaugh, and Allen, 2014; Owen, 2014; Gainous and Wagner, 2014).

Secondary school civics, social studies, and American government courses offer a prime opportunity to impart core political knowledge and to establish habits for acquiring political information in the long term. The acquisition of political knowledge that occurs directly through secondary school instruction can contribute to a “virtuous circle” where gathering political information becomes a lifelong habit (DelliCarpini and Keeter, 1996; Campbell and Niemi, 2016). Yet there is still much to be understood about the conditions under which political knowledge is most successfully conveyed to students. What educational practices and pedagogies are the most effective for students’ acquisition of political knowledge?

There is some modest evidence that students who prepare for high-stakes civics assessments, such as the National Assessment of Educational Progress (NAEP), gain more knowledge than students in schools without this requirement (Campbell and Niemi, 2016). Beyond testing conditions, there are compelling arguments that teacher preparation is essential for improving student political knowledge acquisition. Torney-Purta et al. (2005a:1) identify three key dimensions of teacher preparation: 1) teachers’ content knowledge; 2) teachers’ pedagogical content knowledge; and 3) teachers’ beliefs (e.g. their sense of confidence in teaching the subject matter). This study will address the first dimension—teachers’ civic content knowledge—directly, and explores the second partially by looking at the pedagogies that teachers of employ in their classrooms.

This study focuses specifically on the civic education of high-need middle and high school students. High-need students experience barriers that can impede their educational success. Their schools often lack resources, including textbooks and basic supplies, that are essential to the civics classroom. It may be difficult for teachers to implement certain pedagogies, for example, those requiring updated technological resources. There also may be differences in the pedagogies that are most effective for high-need students compared to more privileged students. High-need students may not have the same opportunities to acquire competencies in subjects like reading and writing that are relevant for civic education. As a result, certain basic pedagogies that work on these skills within the context of studying civics may be especially effective for high-need students. While comparing what works for high need students compared to more advantaged students is an important consideration for future research, it will not be addressed directly here.

The James Madison Legacy Project

This research relies on data from teachers and students participating in the James Madison Legacy Project¹ (JMLP). The JMLP is a three-year nationwide initiative of the Center for Civic Education that aims to expand the availability and effectiveness of civics instruction in elementary and secondary schools by providing professional development (PD) to teachers of high-need students. The program seeks to increase the number of highly effective teachers through professional development based on the Center's *We the People: The Citizen and the Constitution* (WTP) curriculum. The professional development program is designed to improve teachers' civics content knowledge and develop their pedagogic skills in order to enhance students' achievement in attaining state standards in civics and government.

We the People is a curriculum intervention that has involved more than 30 million students and 75,000 teachers in all 50 states and the District of Columbia since 1987 (www.civiced.org/wtp-the-program). The WTP program is grounded in the foundations and institutions of American government, and is distinctive for its emphasis on constitutional principles, the Bill of Rights, and Supreme Court cases, and their relevance to current issues and debates. Students take part in a range of learning activities, such as group projects, debates, document-based inquiry, and relating current events to historical and constitutional precedents. The culminating activity is a simulated congressional hearing where students prepare to answer questions from a panel of judges. WTP middle and high school classes have the option of participating in district and statewide competitions based on the congressional hearings. States send representatives to the National Finals in Washington, DC that are held each spring. Students from several JMLP classes have made it to the National Finals as either winners of their state competitions or wild card teams.

The JMLP PD was administered to four cohorts of teacher participants over the course of four years beginning in 2015. Over 2,000 teachers and 80,000 students nationwide have participated in the JMLP. Teachers from 48 states and the District of Columbia have participated in the JMLP PD program. They attend summer institutes at one of twenty-six sites where they learn about the *We the People* curriculum, are educated in subject-area content, and are instructed in effective pedagogies for presenting the curriculum to students. The JMLP PD covers six content units aligned with the WTP textbook that convey standard civics topics related to the Founding, the U.S. Constitution and the Bill of Rights, and the institutions of government. The JMLP begins with 36 hours of PD at a multi-day summer institute and is followed by an additional sixteen hours of PD during the ensuing academic year. The follow-up PD is spread across three days, typically two in the fall and one in the spring. Locations for the in-person PD sessions include universities, facilities at historic sites, such as Mount Vernon and James Madison's Montpelier, and conference centers. Teachers in the JMLP PD program are instructed in the curriculum's pedagogies by mentor teachers who have experience with the WTP program. At the summer institutes, teachers have the opportunity to prepare for and participate in simulated hearings themselves so that they have first-hand experience with the process. Teachers also engage via the JMLP's online professional community, and they are in regular contact with the program's staff and mentors. They implement the *We the People* curriculum in their classrooms during the academic year following their attendance at the summer institute.

The teachers participating in the JMLP were provided with textbooks, lesson plans, and other resources to facilitate their implementation of the WTP curriculum in their classrooms. At the same time, they work in schools with underserved populations, and often have inadequate resources that can preclude the adaptation of cutting-edge pedagogies, especially those that require technology and software. Table 1 indicates the percentage of teachers in the study reporting that they have adequate access to books, school supplies, like paper, pens, and pencils, technology, such as computers and tablets, Internet access, digital media, and software. 54% of teachers have adequate access to the Internet. The availability of other resources, especially books, digital media, and software, is more limited. Middle school teachers have access to fewer of these resources than high school teachers. 34% of middle school teachers and 42% of high school teachers report that they have adequate access to books, a fundamental educational resource.

Table 1
Adequate School Resources

	Middle School	High School
Books	34%	42%
Supplies, e.g. paper, pencils, pens	46%	52%
Technology, e.g. computers and tablets	44%	51%
Internet	54%	54%
Digital Media	29%	39%
Software	20%	29%

Data

Data were collected on teachers and their students participating in the first three cohorts of the JMLP. The present study employs data from Cohort 2. A total of 427 teachers (173 middle school and 254 high school) for whom there is complete data are included in the study. Teachers of high-need students were recruited for participation in Cohort 2 of the JMLP by the Center for Civic Education’s extensive network of coordinators in the 48 states and the District of Columbia. Coordinators work for civic education organizations, such as state bar associations, in each state. Surveys measuring teachers’ civic content knowledge, instructional goals, pedagogy, access to resources, and self-efficacy were administered online before and after they received the JMLP PD. The teacher knowledge tests were proctored by JMLP staff to preclude teachers from looking up answers while the test was in progress. Students were pretested at the start of their civics class and post-tested after its completion on their civic knowledge, skills, and dispositions. The teacher and student test instruments primarily were administered online. Paper testing was made available when it was not possible to administer the online surveys due to lack of computers and digital resources at the testing sites. Sensitivity analysis was performed to determine if there were statistically significant differences in responses based on the testing condition, and none were found.

Teacher and Student Knowledge

The study included pretest and posttest knowledge measures for both teachers and students. The civics content knowledge tests focused on American founding principles and documents, especially the U.S. Constitution and Bill of Rights, landmark Supreme Court cases, the institutions of government, and political processes, especially voting. The tests were not overly-aligned with the WTP curriculum and were consistent with exams that are typically administered in civics and social studies classes. They included a combination of items that have been used on previously on civics assessments, such as the National Assessment of Educational Progress (NAEP) Civics Assessment, that have known reliability as well as original questions. (For question wording, see Owen and Riddle, 2017.)

The teacher knowledge test consisted of 60 items—58 multiple choice and two short open-ended questions about the number of members of the House of Representatives and Supreme Court justices. The teacher posttest knowledge data were used in this study. The knowledge items were combined in an additive index with each question worth one point. As Table 2 indicates, the index is highly reliable based on Cronbach's α of .991 for the total sample. On average, high school teachers scored six points higher than middle school teachers on the knowledge test, which is to be expected given that high school teachers entered the JMLP PD program with higher levels of civics content knowledge as required for their grade level civics curriculum.

Table 2
Range, Mean Score, and Reliability of Teacher Civic Knowledge Index

	Range	Mean Score	Reliability (Cronbach's α)	n
Total Sample	20-60	48	.991	427
Middle School	20-59	45	.989	173
High School	25-60	51	.992	254

The student tests covered the same general content topics as the teacher tests. There were 22 multiple choice items on the middle school test and 27 multiple choice items on the high school test. The student pretests were administered in the classroom at the beginning of the semester before instruction in the WTP curriculum had commenced. The posttest was administered in class at the conclusion of the WTP instructional period. Most teachers used this test as a course assessment.

For purposes of this analysis, the mean knowledge pretest and posttest scores for each teacher's JMLP class was computed and entered on a data set where teachers are the cases. The mean scores were computed only for students who had taken both the pretest and the posttest.² The student knowledge tests for both middle school and high school are reliable as indicated by Cronbach's α . The posttest instruments are somewhat more reliable than the pretests, and the high school tests are slightly more reliable than the middle school tests. (See Table 3.) All

measures have a reliability of at least .770 which is far greater than .300 which is the standard set by the U.S. Department of Education’s What Works Clearinghouse (2018).

Table 3
Reliability of Student Knowledge Measures
(Cronbach’s α)

	Pretest	Posttest
Middle School	.770	.910
High School	.874	.951

Table 4 depicts the range and average of the mean knowledge scores for the middle and high school tests. On average, students’ scores improved markedly from pretest to posttest. The posttest knowledge gains are statistically significant after controlling for pretest scores. (See Owen, 2018 for a detailed analysis). The pretest and posttest mean scores presented here are averages of mean scores and should be interpreted cautiously as they may be influenced by the size of a class (e.g. a small class with a high score will be given the same weight as a large class with a low score). There are substantial differences in the sizes of the classes in this study. However, the student population from which these classes are drawn is similar in that they all attend schools that qualify as high-need and most are Title I eligible. The mean scores for both middle and high school classes are normally distributed.

Table 4
Range and Mean Scores of Student Knowledge Presttests and Posttests

	Pretest Range	Posttest Range	Pretest Mean	Posttest Mean
Middle School	3.16-19.40	4.67-21.18	8.29	12.93
High School	5.14-21.39	7.41-26.34	13.90	26.34

Teacher and Student Content Knowledge

I begin by testing the assumption that teachers’ content knowledge is fundamental to student learning. It stands to reason that teachers with a strong command of the subject matter should be more successful at imparting information to students than those who are less knowledgeable (Shanahan and Shanahan, 2008). However, there is scant research that tests this association directly in the realm of civic education as corresponding tests of teacher and student knowledge are rarely available (Torney-Purta, et al., 2005a, 2005b). The present analysis provides support for the hypothesis that there is a significant positive relationship between teacher and student civic knowledge.

To examine this relationship empirically, I ran an OLS regression analysis with students’ posttest civic knowledge score as the dependent variable and teachers’ posttest knowledge score as the independent variable of interest. Teachers’ education—the amount of post-secondary education that teachers had completed—was included in the model as a control. This variable took into account degrees earned, substantial credits toward an advanced degree, and high-level teaching certifications, such as certifications in social studies and American history (Witson, 2004). The bivariate correlation between a teachers’ educational background and their

knowledge posttest scores was near zero (Pearson's $R=-.009$). This finding is reasonable given that the teachers all participated in a PD program that focused on conveying content knowledge. The teacher knowledge and education measures were entered as a block in the equation. Students' pretest knowledge score was entered as a covariate in the model to control for their knowledge prior to taking the JMLP class. The student pretest variable was entered as a block. Separate analyses were performed for middle and high school students. The correlation between pretest and posttest knowledge, as expected, was high for students at both levels, but was greater for high school students (Pearson's $R=.687$) than for middle school students (Pearson's $R=.517$) who likely have had less prior exposure to civics content.

As Table 5 demonstrates, there was a statistically significant relationship between teacher knowledge and student knowledge at both the middle and high school levels after controlling for students' pretest knowledge and teacher education. The teacher knowledge coefficient was slightly higher for high school ($\beta=.164$) than for middle school ($\beta=.137$). Teachers' education was significant at the middle school level ($\beta=.111$), but not for high school ($\beta=.056$). The R^2 values for the block containing the teacher knowledge and education variables were statistically significant for both the middle and high school equations. As expected, prior knowledge was the most powerful predictor of student posttest knowledge.

Table 5
OLS Regression Analysis of Teacher Knowledge on Student Knowledge

	Middle School	High School
Beta Coefficients		
Teacher Knowledge	.137 ^a	.164 ^a
Teacher Education	.111 ^a	.056
Student Knowledge Pretest	.549 ^a	.640 ^a
R² for Blocks		
Teacher Knowledge/Education	.099 ^a	.119 ^a
Student Knowledge Pretest	.275 ^a	.382 ^a
R² for Model	.364 ^a	.501 ^a
n	173	254

Pedagogies

The teacher posttest survey asked respondents to indicate if they regularly used 50 specific pedagogic methods in their civics classes during the semester in which they were enrolled in the JMLP. These pedagogies were grouped into seven categories based on their focus: 1) *We the People* pedagogies; 2) basic pedagogies; 3) project-based pedagogies; 4) active classroom pedagogies; 5) community-focused pedagogies; 6) innovative pedagogies; and 7) media-related pedagogies. The individual pedagogies included in each of these categories are described below.

The analysis examines the percentage of teachers in middle and high school employing each of the 50 learning approaches to determine which methods were used most and least often

in the JMLP teachers' classrooms. In addition, additive indexes were created for the basic, project-based, active classroom, community-focused, and media-related pedagogies. Each pedagogy was scored as a binary variable, with 1 indicating that the teacher regularly used the approach and 0 denoting that the pedagogy was not employed. No index was computed for the WTP pedagogies, as the simulated congressional hearing pedagogy encompassed other pedagogies included in the study. The innovative pedagogies were analyzed separately, as they are unique approaches that are not combined reliably in an index.

To examine the combined effect of teacher content knowledge and pedagogy on student knowledge, multiplicative interaction terms were created where appropriate. (These variables are described in the sections on pedagogy that follow.) Correlations (Pearson's R) between the pedagogies, additive indexes, and pedagogy*knowledge interactions and students' average posttest knowledge scores were computed.

Finally, OLS regression analyses were performed for pedagogy*knowledge interactions that were significant to determine if the relationship remained after controlling for student pretest knowledge. Student posttest knowledge was the dependent variable, the pedagogy*teacher knowledge interaction was the independent variable of interest, and student pretest knowledge was entered as a control.

We the People Pedagogies

The *We the People* curriculum features a variety of active learning approaches that are specific to the program and were imparted to teachers during the JMLP PD program. Pedagogies that are central to the WTP program are holding simulated congressional hearings, taking part in a civics competition, having students research document-based questions, holding discussions where students consider issues from a variety of perspectives, holding debates, and discussing current events. Simulated congressional hearings are the culminating activity for the *We the People* program. The simulated hearings encompass the other learning activities, and thus will be subject to additional analysis.

The majority of JMLP teachers incorporated WTP pedagogies into their classes which would be expected given the expectations of their PD program. (See Table 6.) 70% of teachers implemented the hearings in their classrooms. The simulated hearings require students to research and prepare detailed answers to document-based questions, many of which relate constitutional principles to current events. A large majority of middle school (86%) and high school (82%) teachers had their students work on document-based questions. While some teachers did not hold hearings, they did have their students prepare the questions that underpin the learning exercise. In preparing the hearing questions, students discuss issues from a variety of perspectives, and are encouraged to respectfully articulate opposing viewpoints. This approach was adopted in 97% of middle school and 89% of high school classes. Students in 83% of middle school and 78% of high school JMLP classes held debates. Approximately 80% of teachers held discussions of current events. The one exception to the implementation of WTP pedagogies during the JMLP was having students take part in a civics competition which is an optional element of the program. Preparing students for a competition requires resources, such as funds for transportation to the competition sites, as well as a level of experience that first-time

WTP instructors might not feel that they have amassed.³ Classes that hold hearings are eligible to participate in competitions at the district and state level, with winning teams going to the National Finals in Washington, D.C. 19% of middle school and 24% of high school teachers entered their students in civics competitions.

Table 6
Teachers Using *We the People* Pedagogies
Percent

WE THE PEOPLE PEDAGOGIES	Middle School	High School
Simulated Congressional Hearings	71%	71%
Civics Competition	19%	24%
Document-based Questions	86%	82%
Discussions where students consider issues from a variety of perspectives	97%	89%
Debates	83%	78%
Current Events	79%	81%

Correlations (Pearson’s R) were computed to examine the relationship between the students’ posttest knowledge scores and the individual WTP pedagogies. As Table 7 depicts, the relationship was the strongest for the simulated congressional hearings (.234 for middle school; .196 for high school). In fact, this was the only statistically significant relationship for middle school, and the coefficient was larger than for high school. Significant correlations were found at the high school level for debates (.187), issue discussions (.147), taking part in a civics competition (.120), and current events (.120). The lack of association for document-based questions may be due to the fact that most teachers used the approach, so there was limited variation in the measure.

Table 7
Correlations Between Students’ Posttest Knowledge
and *We the People* Pedagogies
Pearson’s R

WE THE PEOPLE PEDAGOGIES	Middle School	High School
Simulated Congressional Hearings	.234 ^a	.196 ^a
Civics Competition	.071	.120 ^b
Document-based Questions	.046	.091
Discussions where students consider issues from a variety of perspectives	--	.147 ^a
Debates	.010	.187 ^a
Current Events	.074	.120 ^a

^ap≤.01; ^bp≤.05; ^cp≤.10

Given that the simulated congressional hearings are the cornerstone of the WTP pedagogy and encompass the other pedagogies, I examined whether classes where teachers

employed the hearings had higher average knowledge scores than classes that did not prepare for and hold hearings. I estimated an analysis of covariance (ANCOVA) model with students' posttest knowledge as the dependent variable, the dichotomous measure of whether or not a teacher instituted the hearings as the factor, and students' pretest knowledge as a covariate. Separate models were run for the middle and high school grade levels. As depicted in Table 8, students in classes where hearings were part of the curriculum gained more knowledge than students who did not have the experience of the hearings at both the middle and high school levels. The mean score for student posttest knowledge at the middle school level was significantly higher for classes where hearings were held than for those which did not hold hearings after the mean pretest knowledge scores are held constant. The difference in the adjusted mean knowledge score for middle school classes with hearings (adjusted \bar{x} =13.01) and classes without hearings (adjusted \bar{x} =11.28) was 1.47, which was statistically significant at $p=.00$. The findings for the high school level, while not quite as strong, were still significant. The adjusted mean knowledge score for classes that held hearings (adjusted \bar{x} =17.89) was higher than that for classes which did not hold hearings (adjusted \bar{x} =17.01), with a difference of .88 that is statistically significant at $p\leq.05$.

Table 8
Student Knowledge Posttest Mean Scores
ANCOVA Model

	\bar{x}	Adjusted \bar{x}	S.E.	\bar{x} Difference	Sign. \bar{x} Difference	n
Middle School						
Hearings	13.33	13.01	.244	1.47	.00	124
No Hearings	11.67	11.28	.381			52
High School						
Hearings	18.03	17.89	.226	.88	.05	179
No Hearings	16.90	17.01	.349			75

I created a multiplicative interaction term for simulated congressional hearings*teacher knowledge. To examine joint effect of holding hearings and teacher knowledge on student posttest knowledge, I performed an OLS regression analysis. Students' posttest knowledge was the dependent variable, the hearings*teacher knowledge interaction was the independent variable, and students' pretest knowledge score was entered as a control. As Table 9 indicates, students of teachers with greater content knowledge who held simulated hearings in their classrooms had higher average posttest knowledge scores. The coefficient for the hearings*knowledge interaction is larger for middle school ($\beta=.207$) than for high school ($\beta=.170$). Both coefficients are statistically significant at $p\leq.01$. These coefficients can be compared to a model that substitutes the main effect of teacher knowledge for the interaction term. The beta coefficient for the main effect of teacher knowledge was .145 for middle school and .164 for high school. Thus, the coefficient for the interaction effect of hearings*knowledge was higher coefficient than for teacher knowledge alone. The difference in the size of the coefficients for the interaction term hearings*knowledge and the main effect of knowledge was larger for middle school than for high school where it was slight.

Table 9
OLS Regression Analysis of WTP Pedagogies on Student Knowledge Posttest Scores
 Standardized Solution

	Middle School	High School
Hearings*Teacher Knowledge	.207 ^a	.170 ^a
Student Knowledge Pretest	.494 ^a	.677 ^a
Adj. R ²	.301 ^a	.472 ^a
n	171	248

^ap≤.01; ^bp≤.05; ^cp≤.10

Basic Pedagogies

Basic pedagogies are well-established learning approaches that have the goal of imparting knowledge and core skills to students. These standard approaches prioritize teacher control over the classroom environment, the organized presentation of information, and formalized assignments. Twelve pedagogies were included in this category: lecture, Socratic Method, reading out loud, reading silently, class discussion, group discussion, library research, Internet research, maps, essay writing, student writing in notebooks or journals, and homework.

As Table 10 depicts, the teachers in the JMLP regularly employed most of these methods in their civics classrooms. The vast majority of teachers lectured to their students (86% middle school; 89% high school). Fewer employed the Socratic Method (64% middle school; 68% high school), where teachers ask students questions to stimulate critical thinking. Almost all of the teachers had their students engage in class or group discussions. Middle school teachers were substantially more likely than high school teachers to have their students read out loud or read silently in class. Internet research is now a staple of civics pedagogy compared to traditional library research. Over 80% of teachers had students conduct research online, while less than a third of incorporated traditional library research into the curriculum. Significantly more middle school teachers used maps in their classes than high school instructors. Three-quarters of teachers at both levels had students write essays, although almost twice as many middle school teachers had students keep notebooks and journals than high school teachers. It is interesting to note that only 63% of middle school teachers and 67% of high school teachers assigned homework, which is a smaller percentage than among teachers of more advantaged students (Owen, 2016).

Table 10
Teachers Using Basic Pedagogies
 Percent

BASIC PEDAGOGIES	Middle School	High School
Lecture	86%	89%
Socratic Method	64%	68%
Class Discussion	97%	93%
Group Discussion	91%	88%
Read Out Loud	83%	52%
Read Silently	77%	65%

Library Research	27%	30%
Internet Research	88%	86%
Maps	76%	52%
Essay Writing	74%	74%
Notebooks and Journals	66%	39%
Homework	63%	67%

Table 11 depicts the correlation (Pearson's R) between the basic pedagogies and student posttest knowledge. (No analysis was run for the discussion variables as almost all teachers held discussions.) The findings suggest that basic pedagogies had a greater positive impact on student knowledge in middle school than in high school. The highest correlation at the middle school level for a single pedagogy was for homework (.209), followed by lecture (.184), and maps (.119). None of the other relationships were statistically significant. At the high school level, the Socratic Method (.180) and Internet research (.103) were the only positive significant findings. Reading out loud and maps were negatively correlated with knowledge.

I created an additive index of the basic pedagogies (range 0-12). The index reliability (Cronbach's α) was .657 for middle school and .772 for high school. The correlation between the basic pedagogy index and student knowledge was not statistically significant for either middle or high school. A multiplicative interaction term for basic pedagogies*teacher knowledge was constructed. The correlation between the interaction term and student knowledge was larger for middle school (.226) than for high school (.109). The middle school coefficient was statistically significant at $p \leq .01$.

Table 11
Correlations Between Student Knowledge and Basic Pedagogies
Pearson's R

BASIC PEDAGOGIES	Middle School	High School
Lecture	.184 ^a	.059
Socratic Method	.017	.180 ^a
Class Discussion	--	--
Group Discussion	--	--
Read Out Loud	-.076	-.138 ^b
Read Silently	-.012	-.029
Library Research	-.044	.056
Internet Research	-.024	.103 ^c
Maps	.119 ^c	-.111 ^c
Essay Writing	-.031	-.018
Notebooks and Journals	.036	-.045
Homework	.209 ^a	.011
Basic Pedagogies Index	.101	.015
Basic Pedagogy Index*Teacher Knowledge	.226 ^a	.109 ^c

^a $p \leq .01$; ^b $p \leq .05$; ^c $p \leq .10$

The bivariate findings for the basic pedagogy index*teacher knowledge interaction at the middle school level held up when a control for students' pretest knowledge was introduced in an OLS regression model. (See Table 12.) The coefficient for the basic pedagogies*teacher knowledge interaction for middle school was .158 and was statistically significant at $p \leq .01$. The high school coefficient was small and nonsignificant.

Table 12
OLS Regression Analysis of Basic Pedagogies Index*Teacher Knowledge
on Student Knowledge Posttest Scores
 Standardized Solution

	Middle School	High School
Basic Pedagogies Index*Teacher Knowledge	.158 ^a	.049
Student Knowledge Pretest	.495 ^a	.683 ^a
Adj. R ²	.283 ^a	.471 ^a
n	171	248

Project-Based Pedagogies

Project-based pedagogies are premised on the assumptions of situated learning that students gain greater understanding of content when they actively engage with the material by working with and using ideas. The learning environment promoted by project-based pedagogies ideally will shift the emphasis from the teacher to the student when investigating questions, proposing hypotheses, conducting research, and engaging in discussions (Krajcik and Blumenfeld, 2004). Project-based pedagogies in this study included students' creation of individual, group, class, digital, simulated election, and portfolio projects. The WTP curriculum encourages students to work cooperatively in groups to prepare for the simulated congressional hearings.

As Table 13 demonstrates, upwards of 80% of teachers had their students work on individual and group projects which would be in keeping with the preparation for WTP's hearings. Fewer teachers had students engage in class projects (41% middle school, 37% high school). Approximately 40% of teachers had students work on simulated election projects. A small percentage of classes used portfolio projects in their civics classes (21% middle school; 17% high school). Over half of middle and high school teachers had their students work on digital projects.

Table 13
Teachers Using Project-Based Pedagogies
 Percent

PROJECT-BASED PEDAGOGIES	Middle School	High School
Individual Projects	81%	80%
Group Projects	86%	86%
Class Projects	41%	37%
Digital Projects	57%	52%

Simulated Election Projects	40%	42%
Portfolio Projects	21%	17%

The correlations (Pearson's R) between the project-based pedagogies and student knowledge appear in Table 14. The only statistically significant correlation in middle school was for class projects (.128). The coefficient for simulated election projects approached statistical significance at the high school level. None of the other project-based pedagogies was significant for high school. The lack of an association for individual and group projects may be due to the fact that there is little variation in these measures as most teachers used these approaches.

I created an additive index of project-based pedagogies (range 0-6). The scale reliabilities (Cronbach's α) were .589 for middle school and .587 for high school. While an imperfect measure, the project-based pedagogies index gives some indication of the extent to which project-based work was a regular occurrence in a class or how much the teacher was adopting a situated learning perspective. A high score on the index means that a teacher used multiple approaches to project-based learning in the class. As Table 14 indicates, the correlation between the project-based pedagogies index and student posttest knowledge was neither strong nor significant for middle or high school. However, the multiplicative interaction term for project-based pedagogies*teacher knowledge correlates significantly with student posttest knowledge for both middle school (.177) and high school (.151).

Table 14
Correlations Between Project-Based Pedagogies and Student Knowledge
Pearson's R

PROJECT-BASED PEDAGOGIES	Middle School	High School
Individual Projects	-.077	.072
Group Projects	.096	.059
Class Projects	.128 ^c	-.023
Digital Projects	.113	.048
Simulated Election Projects	.099	.108 ^c
Portfolio Projects	-.009	.055
Project-Based Pedagogies Index	.111	.091
Project-Based Pedagogies Index* Teacher Knowledge	.177 ^b	.151 ^c

^ap<.01; ^bp<.05; ^cp<.10

Table 15 depicts of the OLS regression analysis of the project-based pedagogies index*teacher knowledge interaction on student posttest knowledge controlling for student pretest knowledge. The coefficient for the interaction for middle school was small and nonsignificant. For high school, the coefficient approached statistical significance, but it was small.

Table 15
OLS Regression Analysis of Project-Based Pedagogies Index*Teacher Knowledge
on Student Knowledge Posttest Scores
Standardized Solution

	Middle School	High School
Project-Based Pedagogies Index*Teacher Knowledge	.071	.079 ^c
Student Knowledge Pretest	.501 ^a	.679 ^a
Adj. R ²	.263 ^a	.474 ^a
n	171	248

Active Classroom Pedagogies

Teachers in the JMLP incorporated active learning pedagogies in their civics classes that complement the WTP curriculum but are not core elements of the program. These classroom activities included mock elections, moot court, having students draft legislation, conducting surveys, putting on plays and skits, and having guest speakers visit the classroom. (See Table 15.) About half of teachers held mock elections in their classes. High school teachers (42%) were notably more inclined to have their students participate in moot court than middle school teachers (25%). High school students (30%) were twice as likely to draft legislation in their civics class than were middle school students (15%). Plays and skits were used more frequently in the middle school classroom (49%) than in high school courses (26%). Similar percentages of middle school (42%) and high school (39%) teachers had students conduct surveys. 38% of middle school and 39% of high school teachers hosted guest speakers in their classes.

Table 15
Teachers Using Active Classroom Pedagogies
Percent

ACTIVE CLASSROOM PEDAGOGIES	Middle School	High School
Mock Election	52%	46%
Moot Court	25%	42%
Draft Legislation	15%	30%
Surveys	42%	39%
Plays and Skits	49%	26%
Guest Speakers	38%	39%

Table 16 presents the correlations (Pearson's R) between the active classroom pedagogies and student posttest knowledge. The correlations were small and nonsignificant for each of the individual pedagogies for middle school. At the high school level, having students draft legislation was the one pedagogy that had a positive correlation with knowledge (.165) and was statistically significant. Incorporating plays and skits into the classroom was negatively related to high school student knowledge.

An additive index of active classroom pedagogies was constructed (range 0-5). The Cronbach's α was .468 for middle school and .531 for high school. For middle school, the correlation was slightly higher for the active classroom pedagogies index than for any of the individual pedagogies, but it was not statistically significant. The active classroom pedagogy index*teacher knowledge index was significantly correlated with student knowledge for middle school, but this association can be largely attributed to the effect of teacher knowledge. The findings are similar, although weaker, for high school.

Table 16
Correlations Between Active Classroom Pedagogies and Student Knowledge
 Pearson's R

ACTIVE CLASSROOM PEDAGOGIES	Middle School	High School
Mock Election	.087	.056
Moot Court	.046	.088
Draft Legislation	.043	.165 ^a
Surveys	.022	-.048
Plays and Skits	.084	-.128 ^b
Guest Speakers	.057	.090
Active Classroom Pedagogies Index	.109	.070
Active Pedagogies Index*Teacher Knowledge	.165 ^b	.106 ^c

^ap \leq .01; ^bp \leq .05; ^cp \leq .10

Community-Focused Activities

Community-focused activities are designed to give students real-world experience with politics and government. The community-focused pedagogies in the study were writing and/or circulating a petition, writing letters to government officials, taking field trips to government or historic sites, attending meetings with government or community officials, attending community meetings, and participating in community activities. (See Table 17.) Fewer teachers incorporated these pedagogies in their civics classes than WTP, basic, and active pedagogies. Middle school teachers were most inclined to take their classes on field trips (43%), write letters to officials (32%), participate in community activities (27%), and meet with leaders (23%). High school teachers were most likely to have their students write letters to officials (40%), go on field trips (34%) meet with government or community leaders (32%), and participate in community activities (29%). Few teachers had their students write or circulate petitions or attend community meetings.

Table 17
Teachers Using Community-Focused Pedagogies
 Percent

COMMUNITY-FOCUSED PEDAGOGIES	Middle School	High School
Write and/or Circulate a Petition	18%	17%
Write Letters to Government Officials	32%	40%
Field Trips to Government or Historic Sites	43%	34%
Meetings with Government or Community Leaders	23%	32%
Attend Community Meetings	8%	15%
Participate in Community Activities	27%	29%

The correspondence (Pearson's R) between community-focused pedagogies and student knowledge was weak for middle school. (See Table 18.) Taking field trips to government or historic sites was the only significant correlation (.131). The findings were somewhat more noteworthy at the high school level, where the coefficients for writing letters to government officials (.109), taking field trips (.109), and meeting with community leaders (.119) were either significant or approaching significance.

An index of community-focused pedagogies was constructed (range 0-6), which had a reliability (Cronbach's α) for middle school of .585 and for high school of .638. A multiplicative interaction term was computed for the community-focused pedagogy index and teacher knowledge. As Table 18 indicates, the correlations between middle school student knowledge and these measures were weak and nonsignificant. For high school, the association was significant for both the index (.129) and the index*teacher knowledge interaction (.154). However, the relationship between community-focused pedagogies*teacher knowledge did not hold up when controlling for student pretest knowledge in an OLS regression analysis.

Table 18
Correlations Between Community-Focused Pedagogies and Student Knowledge
 Pearson's R

COMMUNITY-FOCUSED PEDAGOGIES	Middle School	High School
Write and/or Circulate a Petition	.105	.023
Write Letters to Government Officials	.109	.102 ^c
Field Trips to Government or Historic Sites	.131 ^c	.109 ^c
Meetings with Government or Community Leaders	-.093	.119 ^b
Attend Community Meetings	-.015	.054
Participate in Community Activities	.007	.042
Community-Focused Pedagogies Index	.081	.129 ^b
Community-Focused Pedagogies Index * Teacher Knowledge	.114	.154 ^a

^ap<.01; ^bp<.05; ^cp<.10

Innovative Pedagogies

The study considered four innovative pedagogies that are being used with increasing frequency in civics and social studies classes. These included flipped classrooms, online classrooms (e.g., Google classrooms), the Kagan Method, and serious games. (See Table 19.) In flipped classrooms, students cover basic information about a topic prior to coming to class usually through video lectures. They then engage in a variety of learning activities, such as interactive group projects, making short videos, or games, to explore the material in greater depth (Bergmann and Sams, 2015). Given the requirement that students have access to the technology required for viewing the videos outside of class, the opportunity for teachers of high-need students to institute a flipped classroom is limited. Less than 20% of the teachers in our study used a flipped classroom.

Technology-assisted classrooms have caught on quickly as a tool for educators. The Google classroom platform was introduced in 2014 as a mechanism for integrating daily classroom activities on a dashboard where teachers can organize their administrative tasks and distribute materials, worksheets, websites, and lessons. Students can organize and submit their work through the platform (Heggart and Yoo, 2018). Grade-specific social studies bundles are available for social studies that are targeted to meet standards in individual states. In 2017, over 15 million primary and secondary school teachers were using Google Classroom (Singer, 2017). The online classroom was used by about half of the middle school teachers and 44% of high school teachers participating in the JMLP.

The Kagan Method is a cooperative learning technique that focuses on respectful student peer-to-peer interactions usually in small groups (Kagan, 1994). Small teams of students work toward a learning goal, an approach that could be used with the WTP curriculum's simulated congressional hearings. 15% of middle school and 12% of high school teachers employed the Kagan Method.

The use of serious games, video games that immerse students in virtual worlds, have proliferated in civics and social studies classrooms over the past decade. The learning objective of serious games is to impart content knowledge while at the same time conveying 21st century digital skills (Maguth, List, and Wunderle, 2015). In our study, 47% of middle school and 43% of high school teachers used serious games in their classrooms.

Table 19
Teachers Using Innovative Pedagogies
Percent

INNOVATIVE PEDAGOGIES	Middle School	High School
Flipped Classroom	17%	19%
Online Classroom (e.g., Google Classroom)	49%	44%
Kagan Method	15%	12%
Serious Games	47%	43%

Table 20 presents the correlations (Pearson’s R) between innovative pedagogies and student knowledge. Two of the innovative pedagogies—the Kagan Method (.152) and serious game-based learning (.125)—are significantly correlated with knowledge for middle school students. For high school students, the relationship between all of these approaches and knowledge is near zero. I did not construct an index based on these measures as they represent distinct methods and tools.

Table 20
Correlation Between Innovative Pedagogies and Student Knowledge
 Pearson’s R

INNOVATIVE PEDAGOGIES	Middle School	High School
Flipped Classroom	.059	.069
Online Classroom (e.g., Google Classroom)	.063	-.001
Kagan Method	.152 ^b	.031
Serious Games	.125 ^b	.043

^ap<.01; ^bp<.05; ^cp<.10

Media-Related Pedagogies

The civics curriculum is a logical locus for educating students to navigate the 21st century media environment (Owen, 2016, 2017). Teachers in this study employed a variety of approaches for integrating media literacy and digital media skills into the curriculum. These approaches emphasize accessing news and information websites, teaching students to be critical consumers of news, and having students use digital media to create and post content. The vast majority of teachers had their students access online content related to government and politics. (See Table 21.) Over 80% of teachers in the JMLP had their students access online news sites, and more than 50% instructed their students in the use of government websites and other e-government resources. Middle school teachers (43%) were less likely than high school teachers (61%) to have their students use campaign websites, such as political party and candidate sites. Approximately 80% of teachers taught their students to be critical consumers of news. In keeping with the use of Google Classroom among the study participants, almost 60% of teachers had students share their thoughts, ideas, and other class work via a digital platform. Fewer teachers incorporated active learning approaches related to media into their classrooms beyond sharing work digitally. Less than 40% had students use social media; 19% had students create social media posts, such as posts to Facebook, Twitter, and other platforms; and 20% had students create and post video content online. 35% of middle school and 39% of high school teachers had their students create civics materials, newsletters, videos, and websites. Fewer middle school teachers had their students contact public officials using digital tools (22%) than high school teachers (30%).

Table 21
Media-Related Pedagogies

MEDIA-RELATED PEDAGOGIES	Middle School	High School
Students access online news sites	86%	80%
Instruct students in the use of government websites and other e-government resources	64%	60%
Use campaign websites, such as political party and candidate sites	43%	61%
Teach students to be critical consumers of news	78%	80%
Have students share their thoughts, ideas, and other class work via a digital platform	59%	56%
Students use social media	38%	39%
Contact Officials Using Digital Tools	22%	30%
Have students create social media posts, such as posts to Facebook, Twitter, and other platforms	19%	19%
Have students create and post video content online	21%	19%
Students create civics materials, newsletters, videos, and websites	35%	39%

As Table 22 demonstrates, media-related pedagogies had a greater association (Pearson's R) with student knowledge in high school than in middle school. Using campaign websites (.170) and teaching students to be critical consumers of news (.142) were significantly correlated with middle school student knowledge. For high school, statistically significant associations were evident for accessing online news sites (.130), instructing student in the use of government websites (.161), using campaign websites (.154), teaching students to be critical consumers of news (.108), and having students create and post video content online (.121).

An additive index of media-related pedagogies was created (range 0-10). The index reliability (Cronbach's α) was .771 for middle school and .698 for high school. There were statistically significant correlations between the media-related pedagogies index and student knowledge for both middle school (.169) and high school (.189). I also constructed a multiplicative interaction term for media-related pedagogies*teacher knowledge. The pedagogy*knowledge interaction was significantly correlated with student knowledge for both middle school (.239) and high school (.249).

Table 22
Correlations Between Media-Related Pedagogies and Student Knowledge
 Pearson's R

MEDIA-RELATED PEDAGOGIES	Middle School	High School
Students access online news sites	.089	.130 ^b
Instruct students in the use of government websites and other e-government resources	.073	.161 ^a
Use campaign websites, such as political party and candidate sites	.170 ^b	.154 ^a
Teach students to be critical consumers of news	.142 ^b	.108 ^b
Have students share their thoughts, ideas, and other class work via a digital platform	.022	.021
Students use social media	.057	.062
Contact Officials Using Digital Tools	.059	.087
Have students create social media posts, such as posts to Facebook, Twitter, and other platforms	.077	.073
Have students create and post video content online	.095	.121 ^b
Students create civics materials, newsletters, videos, and websites	.090	.072
Media-Related Pedagogies Index	.169 ^b	.189 ^a
Media-Related Pedagogies Index*Teacher Knowledge	.239 ^a	.249 ^a

^ap≤.01; ^bp≤.05; ^cp≤.10

The relationship between the media-related pedagogy interaction and student posttest knowledge remains statistically significant when controlling for student pretest knowledge in an OLS regression analysis as shown in Table 23. The beta coefficient for middle school was .130 and for high school was .162.

Table 23
OLS Regression Analysis of Media-Related Pedagogies Index*Teacher Knowledge
on Student Knowledge Posttest Scores (Standardized Solution)

	Middle School	High School
Media-Related Pedagogies Index*Teacher Knowledge	.130 ^b	.162 ^a
Student Knowledge Pretest	.487 ^a	.651 ^a
Adj. R ²	.273 ^a	.472 ^a
n	171	249

Conclusion

The foregoing exploratory analysis has revealed some noteworthy findings. First, the research provides evidence of the connection between teachers' content knowledge and their students' acquisition of civic knowledge. While this association makes sense intuitively, there is little research that empirically establishes the correlation directly. This study benefits from having measures of civic knowledge for a large number of teachers and their students.

A primary focus of the study is on the effectiveness of the JMLP curriculum on civic knowledge outcomes for high-need students. The majority of JMLP teachers implemented the simulated congressional hearings in their classrooms which is the learning approach identified closely with the WTP program. Some teachers who did not hold the hearings used other WTP pedagogic elements, such as having students answer document-based questions. The strongest pedagogy-related finding in the study is that students in classes where the simulated hearings were held gained significantly in civics content knowledge, especially at the middle school level. The combination of teachers' knowledge and using the pedagogy of the hearings resulted in statistically significant increases in student knowledge.

This study finds some variations in the pedagogies that are employed most frequently in high-need classrooms at the middle and high school levels. Basic pedagogies were used more often in middle school than in high school, especially reading out loud or silently, studying maps, and keeping notebooks and journals. High school teachers were somewhat more inclined to employ active classroom pedagogies, such as moot court and having students draft legislation. Students in high school also were more likely to take part in community-related activities, like writing letters to officials, meeting with government and community leaders, and attending community meetings, than middle school students. Media-related pedagogies for the 21st century, such as contacting officials using digital tools and consulting campaign websites, were incorporated into high school civics classrooms somewhat more often than in middle school classes.

Some general grade level trends about the types of pedagogies associated with student knowledge emerged in the analysis. (A summary of the correlations between pedagogies and student knowledge by grade level appears in Table 24). Lecture, which is a staple pedagogy in many classrooms, appears to be more effective in conveying information in middle school than in high school, where the Socratic Method is significantly correlated with knowledge. Assigning homework corresponds to higher levels of knowledge for middle and high school. The coefficient for homework is among the strongest for middle school. Innovative instructional methods, specifically the Kagan Method and serious games, correspond to higher levels of middle school student knowledge, although there is no relationship at the high school level. The connection between community-related pedagogies and student knowledge is most apparent at the high school level, particularly activities that involve contact with government and community officials. More media-related pedagogies are associated with student knowledge for high school than middle school, where only teaching students to be critical consumers of news is statistically significant.

Table 24
Summary of Significant Correlations of Pedagogies and Student Knowledge
 Pearson's R

	Middle School	High School
Simulated Congressional Hearings	.234	.196
Civics Competition		.120
Discussions where students consider issues from a variety of perspectives		.147
Debates		.187
Current Events		.120
Lecture	.184	
Socratic Method		.180
Maps	.119	
Homework	.226	.109
Class Projects	.128	
Simulated Election Projects		.108
Draft Legislation		.165
Field Trips to Government or Historic Sites	.131	.109
Write Letters to Government Officials		.109
Meetings with Government or Community Leaders		.119
Kagan Method	.152	
Serious Games	.125	
Students access online news sites		.130
Instruct students in the use of government websites and other e-government resources		.161
Use campaign websites, such as political party and candidate sites		.154
Teach students to be critical consumers of news	.148	.108
Have students create and post video content online		.121

It is important to acknowledge some limitations of this study. The research was conducted in conjunction with the JMLP which emphasized pedagogies that are associated with the WTP curriculum. Teachers received instruction in these pedagogies and were expected to use them in their classrooms. Thus, teachers may have implemented WTP pedagogies to a greater extent than they would have prior to participating in the JMLP. In addition, the pedagogy categories designated for this study are meant to provide some analytical structure for the analysis. However, there is potential overlap between some of the categories and individual pedagogies. The WTP pedagogies, for example, can also be considered active classroom pedagogies. The analysis also does not account for constellations of pedagogies from different categories that may work effectively together. For example, group and class project-based learning approaches could be considered WTP pedagogies that work effectively in conjunction with the curriculum. Further, the correlational analysis cannot accurately reflect the influence of pedagogies employed by a large percentage of the teachers because there is no basis of

comparison. Another research strategy, such as classroom ethnographies, may be useful in determining the efficacy of approaches such as class and group discussion. In addition, the individual pedagogy measures used in this analysis are dichotomous. Teachers indicated if they used a pedagogy in their JMLP classrooms regularly or not. As such, each pedagogy that was used in the classroom is given equal weight. A more refined measure would ask how frequently a teacher employed a particular pedagogy.⁴

This exploratory analysis provides a foundation from which future studies of the influence of teacher knowledge and pedagogy on student civic outcomes can proceed. The analysis examined the relationship between pedagogies and student knowledge. However, some of the pedagogies may be more conducive to students' acquisition of civic dispositions and skills, such as the community-related pedagogies. In addition, future studies might compare the pedagogies that are most effective for high-need students and more advantaged students.

Notes

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² The attrition rate for students in Cohort 2 is 18% for middle school and 21% for high school. These rates are within the acceptable range as defined by the What Works Clearing House of the U.S. Department of Education. See Owen, 2018, for a detailed analysis of the sample attrition.

³ Despite resource and experience considerations, three JMLP WTP teams have gone to the National Finals in their first year of competition.

⁴ This measurement strategy was used in the data collection for Cohort 3 of the JMLP research which is still being assembled.

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