ADOLESCENT CIVIC ENGAGEMENT IN AUSTRALIA AND THE UNITED STATES: THE ROLE OF COMMUNITIES OF PRACTICE

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Abstract

This study examines the relationship between socio-cultural dimensions of communities of practice and adolescent capacities for civic engagement in Australia and the United States using items from the 1999 Civic Education Study (Torney-Purta, Lehmann, Oswald & Schulz, 2001). Utilizing a refined notion of communities of practice, this paper analyzes the relationship of two dimensions of communities of practice—the discourse community and the participatory community and civic knowledge and expectations for informed voting. The study also examines the extent to which the various dimensions of communities of practice are related to more equitable civic outcomes, and how these associations vary in the two countries. This analysis employs HLM, a multilevel modeling technique that allows for individual- and school-level predictors to be used simultaneously in the analysis of an outcome, and it allows for interactions between student- and school-level variables to be examined.

Key Words: Communities of Practice, Socio-Cultural, Civic Engagement, Citizenship Education, Comparative International Education

Schools are places where learning is embedded within social experiences. Although the socially embedded nature of schooling can constrain learning, it can also create powerful places in which students and adults come together to understand a range of views and opinions, places that cultivate attitudes and behaviors that contribute to the common good and the renewal of democratic societies. As such, schools are uniquely poised to facilitate students' understanding of how to engage in political and nonpolitical activities that promote democratic ends and more just policies (Galston, 2001; Torney-Purta, 2002). From this perspective, understanding the relationship between the social structures of schools and the development of student capacities for civic engagement can be seen as a practical exploration of the link between educational practices and democratic theory.

Emerging efforts to understand learning have led many education researchers to investigate the mediating role of culture and social context in the academic and cognitive growth of children. This theoretical perspective, sometimes referred to as the socio-cultural perspective (Vygotsky, 1986), has the potential to bridge concerns about enhancing learning in both core subject areas and civic education. One such approach to understanding the culture and social context is the notion of "communities of practice" (Lave & Wenger, 1991; Wenger, 1998); this construct focuses on the social organization of groups, including the interactions of students and adults that affect the learning of young people. Communities of practice, broadly viewed as encompassing schools, or more narrowly conceived as encompassing classrooms and sets of activities, are thought to create normative expectations and forms of interaction supportive of students' academic and social achievement. Although recent work suggests the potential utility of examining the link between communal structures in schools and the development of civic capacities (e.g., Torney-Purta, Homana & Barber, 2006), this area of research is relatively under developed. There is also limited research about how to measure these aspects or dimensions of community, especially as they relate to civic engagement.

This study uses the construct of "communities of practice" (Lave & Wenger, 1991; Wenger, 1998) to develop a conceptual framework for measuring and examining the communal aspects of schools that influence the nature of civic engagement. In this study, communities of practice are seen as social places or structures where students practice what it means to be thoughtful and engaged members of society. From this perspective, the power of a particular community of practice rests with the nature of the learning opportunities that it creates for students. Although not all communities provide positive environments for civic engagement (Portes, 1998; Portes & Landolt, 2000), in this study, communities of practice, by definition, represent a positive, inclusive, safe, and healthy learning environment for students.

The focus of this paper is an examination of the relationship between dimensions of communities of practice and various modes of civic engagement in Australia and the United States, using items from the 1999 IEA Civic Education Study (Torney-Purta, Lehmann, Oswald, & Schultz, 2001), to learn more about the social and cultural characteristics of schools and how these characteristics influence the development of civic capacities among adolescent students. The primary purpose of this investigation is to understand whether two specific dimensions of communities of practice—the *discourse community* at school and the *participatory community* at school (Torney-Purta, Homana & Barber, 2006)—are associated with two specific capacities for civic engagement—students' civic knowledge and expectations for informed voting. This study uses the notion of communities of practice to explore the development of students' capacity for civic engagement across schools while also considering issues of individual socioeconomic background along with components of school structure, such as size and composition.

Context for Civic Engagement in Australia and the United States

Civic Education in Australia and the United States

Since colonization attempts to incorporate civic education within the public education systems have been ongoing in Australia and the United States. When Australia gained independence from England in the early 20th century, civic education focused on developing and maintaining loyalty to Britain rather than to the political and social fabric of Australian society. During World War II, however, civic education lost its formal role as a distinct subject matter, when it became a part of history education. During the 1960s, civic education was integrated into the general social studies education curriculum. In 1994, concerns about the lack of a civically engaged population prompted the commission of a Civics Expert Group to explore the role of civics education in the school curriculum. The Commission's report, *Whereas the People... Civics and Citizenship Education* (Civic Expert Group, 1994) was released the same year that Australia agreed to become part of the IEA Civic Education Study. In 1997-2004, the Australian National Government funded the *Discovering Democracy* program to help to prepare students become effective and responsible citizens, learn about the government and law, and understand the country's democratic heritage. The funding provided curriculum resources for all schools, professional development, and other national activities to support the program. An evaluation of the program found mixed results. For example, some schools have taken full advantage of the program resulting in civic education becoming embedded in the democratic operation of the schools. Many schools, however, report competition between the program and other academic areas resulting in a token role for civic education in the curriculum. Currently, civic education is not a core subject in Australia, and, as in the United States, its inclusion in the curriculum is primarily a decision made by local schools dealing with multiple educational demands.

In schools in the United States, civic education has had a similar trajectory as in Australia. The debate about the civic purpose of education has roots in the early years of the new republic when concerns about nationalism and the creation of a dominant culture were prevalent. Civic education during much of the 20th century focused on what students should know and be able to do in the field of civics and government. Yet, throughout the 20th century, specific historical periods, such as the Great Depression of the 1930s and the Civil Rights Era of the 1960s, brought challenges to traditional civic learning and stressed a rethinking of freedom, rights, and democratic values, including the role of multicultural education in civics education.

Currently, civic learning in the United States, as it is in Australia, is primarily covered in social studies classes. More often than not, civic education is not a distinct separate subject of study due to limited teacher expertise and other competing factors. In the United States, forty-two states have statutes that address the acquisition of citizenship knowledge and skills (Education Commission for the States, 2008).

Policy Threats to Educating for Civic Engagement

Despite growing interest in civic engagement and the need for students to develop into politically aware and civically responsible citizens, some believe that educating for civic engagement in the United States is now threatened by a new wave of "high stakes" reforms to raise academic achievement, particularly in the lower grades and in schools that serve historically disadvantaged populations (Valli, Croninger, Chambliss, Graber, & Buese, 2008). These reforms, which hold schools accountable for achievement in a select set of subjects, have encouraged what has been referred to as "narrowing of the curriculum." This phenomenon means that core subject areas, such as reading and math, are given priority over other subject areas, including civic education. Curriculum material not tested is excluded by teachers and schools to maximize test scores on the material that is tested. At issue is the extent of change in curriculum and instructional time for both tested and non-tested subject areas with the emphasis placed on tested subjects, such as reading and math, at the expense of other subjects, including civic education, social studies, and history (Chudowsky & Chudowsky, 2005; McMurrer, 2006; Rentner, 2007).

At the same time, efforts are underway in Australia to establish a national curriculum (Office of the Prime Minister, 2008) that would include national standards and accountability for academic achievement. Holding Australian schools accountable for academic achievement is consistent with the accountability trends evident in the 2002 No Child Left Behind Act in the United States, though the details of the Australian framework are still being debated. It does appear, however, that civics and citizenship education may be included as a component of the national curriculum, along with English, mathematics, and science. Although civic education will be included in the national curriculum, accountability requirements and testing standards still raise concerns about the nature of citizenship education that will be provided by Australian schools (Kennedy, 2008). Specifically, given the pressure of annual standardized high-stakes tests, how will citizenship education conform to what is being tested on the test? Will the tests encourage critical thinking about civic-related issues, or will they encourage the memorization of more easily tested facts? We argue that opportunities for students to engage in meaningful civic learning, participate in open discussions about social and political issues, and extend their learning beyond the school to address real community issues are critically important for the development of politically aware, actively informed, and civically engaged citizens.

In both Australia and the United States, education reforms have emerged with the potential to shape and reshape the education of young people for civic engagement. Although few in the United States would argue with the need to improve achievement for all children, there is no indication either that the public wishes to terminate the schools' historic responsibility to prepare students to participate meaningfully in society. In the United States, the issue for some has become the extent to which high-stakes testing will accelerate a historical trend toward narrowing the curriculum in schools, including minimizing or even eliminating civic-related curriculum (Valli et al., 2008). In Australia, the issue is not the elimination of educating students for civic engagement. Rather, the issue concerns what is taught, how it is taught, and whether students have opportunities to engage in learning that supports a broad approach to civic learning and action. For both countries the question becomes how to enhance learning, not only in core subject areas but in areas such as civic education as well.

Addressing these educational issues requires transforming the perceptions of policymakers, practitioners, researchers, and the public in general about the possibilities for learning that exist in schools. Advancing the notion of the importance of normative structures and cultures in school to help shape civic outcomes is an alternative way to think about teaching and learning; it emphasizes not only the formal content of curriculum but the manner in which the school environment supports broad curricular goals and deeper forms of engagement with content. The empirical evidence in this study and related studies may lead to the creation of policies and practice that support positive forms of school environment—that is, forms that promote multiple academic and civic goals. Embracing a broader approach to teaching and learning can also help students achieve their full potential as both individuals and citizens.

Communities of Practice

This study focuses on how communities of practice in schools are likely to influence the development of student civic engagement. The central framework for the study comes from the literature on communities of practice (Lave & Wenger, 1991; Wenger, 1998). In communities of practice students come together because they have common concerns, interact to sustain mutual agreement on issues, build mutual trust and respect for one another, and develop individual identities that encourage meaningful engagement in the social world. In communities of practice students are encouraged to make up their own mind about civic issues; feel free to express their opinions, even when their opinions differ from most other students; learn to understand others' views; learn to cooperate in groups with others; and act together to solve problems in their schools and neighborhoods. Exploring the role of communities of practice offers a way to understand the challenges and possibilities associated with encouraging forms of

civic learning that promote positive social and cultural norms for the betterment of the student, the school, and society.

Central to the original conceptualization of communities of practice is the process of *legitimate peripheral participation*. For Lave and Wenger (1991), learning is an integral part of the generative social and cultural practices that create and sustain learning communities over time. Legitimate peripheral participation can be seen as that part of the learning process through which individuals engage in and begin to understand the social and cultural practices of a community—e.g., common language, knowledge, and experiences. In this way, individuals identify, share, and develop a context for learning as a member of the group (in this case, a classroom or school). Legitimate peripheral participation is a transformational process through which newer members of a community move from being novices to becoming experts of the community. For schools this suggests that communities of practice can serve as places where students develop and practice the civic knowledge, abilities, and attitudes that transform them from novice to competent citizens who are prepared to address their civic responsibilities as adults.

Refining Communities of Practice for Civic Engagement in Schools

Torney-Purta, Homana and Barber (2006) have refined Lave and Wenger's (1991) and Wenger's (1998) conceptualization of communities of practice to include two distinct and positive dimensions of healthy school community for the purposes of understanding the development of student norms of civic engagement. These dimensions are the *discourse community* and the *participatory community*, which at their core emphasize quality learning experiences that are intended to positively foster students' transition from novice to civically competent individuals.

The discourse community of practice. This community focuses on students as they do the cognitive work related to engaging in dialogues and discussions with other students and their teachers, initially in the classroom but also extending to other school activities (Torney-Purta et al., 2006). In the discourse community, students interact to sustain mutual agreement on common civic concerns. Meaningful civic learning can occur within the context of participation in a school's discourse communities. As such, it can serve as a bridge for civic engagement because it can help facilitate common understandings and opportunities for dialogue leading to support for civic responsibility.

Through group membership and participation, the discourse community of practice supports the development of meaningful civic knowledge relevant to action. Torney-Purta and Richardson (2003) identify several features necessary for meaningful civic learning: students' past understandings are made authentic by connections to current issues and concerns; students' construction of their own civic knowledge contributes to improved civic understanding; discussion and dialogue promote an open exchange of ideas where students listen and build on others' opinions. Westheimer and Kahne (2003, 2004) further suggest that meaningful civic learning includes developing skills to critique, analyze, and formulate action plans.

Instructional practice that moves beyond traditional teaching approaches, such as lecturing, is crucial in this process. Teaching strategies such as debates, deliberations, and simulations can encourage active construction of civic knowledge and increase students' deep inquiry and higher-order thinking on civic issues (see for example, Carnegie Corporation of New York & Center for Information and Research on Civic Learning, 2003; Conover, Searing, & Crewe, 2002; Dejaeghere & Tudball, 2007; Hahn, 2005; Hess, 2008; Kerr, Ireland, Lopes, Craig, & Cleaver, 2004; Mellor, Ainley, Fraillon, & Wernert, 2006; Torney-Purta, 2002).

Although there is not a solid body of causal evidence about the effects of instructional practice on student civic outcomes, existing research suggests that these practices deserve attention. Research on

social studies classrooms in Chicago revealed lower-level student thinking; a thin and fragmented knowledge base; and few substantive opportunities to discuss democratic processes linked to civic problems (Kahne, Rodriquez, Smith, & Thiede, 2000). In an earlier study of social studies classrooms in 106 middle and high schools, Nystrand, Gamoran, and Caronaro (1998) found that approximately 90 percent of the instruction involved no discussion about issues. Internationally, teacher-centered methods appeared dominant in civic-related classrooms in most countries (Torney-Purta et al., 2001), although there were also some opportunities for discussion of issues (Torney-Purta, 2002). Even though cognitive research advocates for deeper engagement with civic topics in classrooms where teachers utilize more constructivist techniques, it appears that most teachers predominantly utilize traditional rather than more interactive and experiential methods. At the same time, barriers often exist that limit the opportunities for discussing controversial issues in schools. Teachers, for example, may fear a backlash from the community if the discussion is too controversial, feel ill-prepared to use this type of pedagogy, or not have the necessary in-school support to conduct the work (Hess, 2005; Hess & Avery, 2008).

Most importantly, all students require meaningful opportunities to develop their capacity for civic engagement and their sense of civic identity. According to Wenger (1998), meaningful learning is central to human identity. In the discourse community, the meaning constructed by the individual is shaped by and helps to shape the community in which students come together as a group to understand, interact, and make sense out of what they are learning and how it applies to their lives and the world around them. By participating in communities of practice, abstract concepts and ideas become meaningful understandings shared among the group members. In this sense, exploring ideas and formulating options for action with others in the group is an active social process. This process invites challenges to opinions from students who hold different ideas based on different experiences to help create opportunities for students to delve more deeply into the issues, develop the skills of negotiation, and tailor action that reflects common agreement.

The participatory community of practice. This community emphasizes active involvement in experiences that provide distinct opportunities for students to engage in action and change. In the participatory community students practice the skills and behaviors that are associated with the discourse community and transform them into addressing real problems in their schools and neighborhoods. In this community of practice students join together to examine civic issues around which they engage in decision-making and participate in meaningful change.

Research suggests that schools serve as important places to help cultivate student civic participation. A number of studies provide evidence of the positive association of participating in extra-curricular activities with civic outcomes such as running for office, voting, donating money to a campaign, writing letters to a newspaper, and working on neighborhood problems (Beck & Jennings, 1982; Glanville, 1999; Hanks & Eckland, 1978; Siegel & Hoskins, 1981; Verba, Schlozman, & Brady, 1995). More recently, exploratory analyses of the IEA Civic Education data investigated the relationship of adolescent student participation in extra-curricular activities in school and civic outcomes. Students' participation in these types of activities were found to be associated with trust, expectations for future voting, conventional political participation, and higher scores on civic knowledge (Homana & Barber, 2006; Homana & Greene, 2006)

Schools may also facilitate opportunities for students to connect what they are learning in school to help solve neighborhood problems (Cleaver, Ireland, Kerr, & Lopes, 2004; Ireland, et al., 2006). Large scale quantitative studies and analyses (Kennedy & Mellor, 2006; Melchior, 1999; Mellor, Kennedy, & Greenwood, 2001; Torney-Purta et al., 2007) found that high school and middle school students who engaged in curriculum-connected community service had increased greater trust, efficacy, identity, tolerance, and commitment to service; and increased intention to vote and belief that they can make a difference in their communities. Participation in curriculum-connected community service is also a predictor of expected civic

participation, valuing school, and high levels of academic motivation (Billig, Root, & Jesse, 2005; Kahne & Sporte, 2008).

At the same time, Perry and Katula (2001) found insufficient evidence to support a connection between service participation and political learning and participation. Similarly, in their two-year evaluation of the AmeriCorp program, Simon and Wang (2002) found no change in participants' civic attitudes or social trust, that participants did not become more confident in public institutions but rather developed a greater distrust of government and powerful officials, and that participation in service had little impact on beliefs regarding politics and society.

While Torney-Purta and colleagues' (2006) refined notions of communities of practice, along with other studies that have sought to understand the development of desirable civic outcomes among youth, can enhance our understanding of the schools' role in the development of student civic engagement, few studies have placed the association of communities of practice with civic engagement at the center of analysis, so there is limited literature from which to develop a research design or guide the interpretation of results. To address this issue, this investigation undertakes three approaches. First, the study utilizes Torney-Purta and colleagues' (2006) communities of practice framework to examine its association to civic learning and the instructional processes that promote this learning, especially the perceptions of students about the schools' discourse and participatory communities. Second, it clarifies how the dimensions of communities of practice fit within the overall socio-cultural organization of school. Third, it examines the possibility that each community of practice may diminish or exacerbate the potential relationship between students' family background and desirable civic outcomes.

Summary

The major purpose of the study is to examine the associations between the dimensions of positive communities of practice in school and two capacities that underlie civic engagement (civic knowledge and expectations for informed voting). Additional purposes of the investigation include considering the extent to which the various dimensions of communities of practice are related to more equitable civic outcomes, and how these associations vary in Australia compared to the United States. This study may provide some insights into the importance of local policies and practices consistent with promoting desirable civic outcomes in schools. It also expands the theoretical and empirical literature on the possible connections between communities of practice and the development of civic engagement.

Methods

Comparative international work is particularly valuable in understanding the similarities and differences among students and schools across countries providing an opportunity to examine whether it is possible to replicate the model for two different samples of students and schools. As such, this type of analysis benefits from large-scale surveys of students, teachers, and schools. For this analysis, data from the 1999 International Association for the Evaluation of Educational Achievement (IEA) Civic Education Study (Torney-Purta et al., 2001) is analyzed to examine how communities of practice are related to civic outcomes among adolescent students in Australia and the United States.[1]

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[1] The twenty-eight countries that participated in the IEA Civic Education Study display a range of similarities and differences from education to political and economic institutions. Australia and the United States were two of the more comparable countries in that study. For example, Australia and the United States share similar governmental structures and exist as established democracies; educational systems with similar reform movements; orientations to free markets; and concerns regarding educating for civic engagement. A comparison of results from each country provides a more robust examination of the theoretical and empirical utility of the communities of practice framework to understand how schools in modern, democratic societies can enhance capacities for civic engagement.

In 1994, the International Association for the Evaluation of Educational Achievement (IEA) began planning a study of civic education. A case study phase from 1994 to 1998 used qualitative data to develop an instrument to measure political knowledge, attitudes (see Torney-Purta, et al., 1999), and civic engagement of approximately 90,000 14 year olds in 28 countries (Torney-Purta et al., 2001). For this analysis, we are interested in measuring students in two competencies—civic knowledge and expectations for informed voting—and analyzing how these student competencies can be predicted by the two dimensions of communities of practice in Australia and the United States. The IEA Civic Education Study is a particularly useful survey to use for these purposes. In addition to the student survey, the IEA Civic Education Study also had an explicit emphasis on the role that schools and teachers play in educating for civic engagement.

Sampling and Variables Chosen for this Analysis

Nationally representative samples of students in Australia and the United States were selected as data sources for this current investigation. In Australia, 3,331 students with an average age of 14.6 years in 142 schools participated in the survey. In the United States, 2,811 students with an average age of 14.7 years in 124 schools participated in the survey.

Student level data from each of the two countries are used for the analysis. Because students are nested within schools, multilevel modeling is an appropriate methodology for analyzing these data. Hierarchical linear modeling (HLM) (Raudenbush & Bryk, 2002) is used to examine variation between schools in the measures of communities of practice, civic engagement, and student and school characteristics that may influence them. This analysis does not assume that all students experience the communities of practice similarly. Therefore, we consider how both individual and collective perceptions of these communities are related to positive civic outcomes. Student self-report responses from the IEA Civic Education Study serve as data for an analysis at the student and school levels. In addition, this analysis examines similarities and differences in the results for the proposed models between Australia and the United States. [2]

The dependent variables include total civic knowledge and expectations for informed voting. The independent variables include the two dimensions of communities of practice—the discourse community and the participatory community. All scales and items used in the analysis are identified in Table 1.

Data Adequacy

Most of the measures used at the school level were aggregated from the student level. Specifically, these measures include the average school discourse community and school participatory community, and school and student socioeconomic status (SES). Depending on the purpose of the analysis, these measures were standardized using either IEA established standards for means and standard deviations or more conventional standards for means and standard deviations expressed as z scores. [3] The school size

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[2] It is important to note that although this study examines both individual student and collective beliefs about these communities of practice, in this study, communities of practice are considered distinct from individual student learning experiences. For this investigation, the primary focus is on the collective nature of the school environment. The strength of communal nature of communities of practice for civic engagement are reflected by the pervasiveness of positive beliefs associated with these communities across the school, rather than just individual student's learning experiences.

[3] To ensure the scales could be compared across the twenty-eight countries, the IEA established civic knowledge at an international mean of 100, and a standard deviation of 20. The attitudinal scales in the survey were set at a mean of 10, and a standard deviation of 2.

variable at the school level was merged from the school dataset of the IEA Civic Education Study and estimated with a series of variables due to missing data. Two proxy variables (full-time student enrollment in the 9th grade and number of full-time teachers) were used to impute values for schools with missing data on full-time student enrollment. Each proxy variable was correlated strongly with full-time student enrollment (r > 0.80) making these imputations reasonably reliable. For cases with missing data across all variables (approximately 18 percent for the Australian sample and 15 percent for the United States sample), the mean value for school size was used in the imputation of values for the final variable. Table 2 compares descriptive statistics of the analytic samples for Australia and the United States used in the analysis.

School and Student Variance

The intraclass correlations (ICCs) and reliability estimates (λ) were calculated all of the communities of practice variables and all of the civic capacity variables. The purpose of calculating these statistics was to determine the amount of variability at each level by partitioning the total variance of the variable into school variance (between group variance) and student variance (the within-group variance). All measures were found to vary significantly between schools.

In Australia, the between school variance for the discourse community and participatory community was approximately 7% and 6%, respectively. In the United States the variance for these communities of practice was approximately 5% and 4%, respectively. Although small, the variability is still appropriate to model using HLM. The between school variance for civic knowledge and expectations for informed voting in Australia was 20% and 5%, respectively. In the United States, the variance for these same variables was 28% and 8%, respectively.

In addition, the reliability estimates for Australia (discourse community $\lambda = 0.59$; participatory community $\lambda = 0.53$; civic knowledge $\lambda = 0.82$; expectations for voting $\lambda = 0.52$) suggested that the data available within schools are strong enough to detect effects at the school level. Similarly, the reliability estimates for the United States (discourse community $\lambda = 0.51$; participatory community $\lambda = 0.45$; civic knowledge $\lambda = 0.86$; and expectations for informed voting $\lambda = 0.62$) suggested the same.

Model

Two models are presented for each of the two outcomes of interest—civic knowledge and expectations for informed voting. The models provide a comparison between Australia and the United States of the relationship between the two dimensions of civic capacity and average student perceptions of communities of practice after controlling for average student SES and school size. They also consider whether the relationship between individual student SES and each of the civic capacities might be a function of students' average perceptions of communities of practice.

Table 2 presents the results for Australia and the United States, first without controls and then with controls. The rows present the parameter estimates (γ_{qq}) for each dependent variable, beginning with civic knowledge. The results for the within- or student-level model are represented on the left side of the table (γ_{00} through γ_{30}). These results report the coefficients for the student-level variables (e.g., individual perceptions of the discourse community or individual student SES). The results for the between-school model are represented by the indented variables listed under the school intercept (γ_{00}) and the SES slope intercept (γ_{30}). These results report the coefficients for the school-level variables (e.g., average perceptions of the discourse community and average student SES). Because the dependent variable is standardized ($M = 0$, $SD = 1$), both the student-level and school-level coefficients can be interpreted as effect sizes. The variance components for each model are included in Table 3: the adjusted variance

between schools in the intercept (u_0), the adjusted variance between schools in the SES slope (u_4), and the adjusted variance within schools (r).

When examining the coefficients for the communities of practice variables and SES, we considered whether there were any indications of a contextual effect—that is, an independent association for one of these variables at *both* the student and school levels. Such an association would indicate that a student's civic capacity could be the function of not only her beliefs about pedagogical practices associated with communities of practices but the beliefs of her peers as well. Because we grand-mean centered all of the student-level measures of communities of practice, the school-level counterparts for each measure provide a direct test of whether a contextual effect could exist. For civic knowledge and expectations for voting in the United States, where individual student SES is group-mean centered, we used an ad hoc hypothesis test to determine if a contextual effect might exist.

Relationship of the Discourse Community of Practice and Civic Capacities

The discourse community is a consistent predictor of students' civic capacities. Analyses of the association between the discourse community and civic engagement, however, do differ depending on the specific type of civic capacity considered. In both Australia and the United States, the discourse community has its strongest association with students' expectations for informed voting (0.18 SD and 0.16 SD, respectively). At the same time, the discourse community also significantly influences the development of civic knowledge (0.09 SD and 0.08 SD, respectively) in both countries.

One explanation for the association between the discourse community and expectations for informed voting may be the type of issues discussed by students. The specific content of the issues discussed among the students in the IEA Civic Education Study is unknown. In fact, the emphasis of the school curriculum is typically on government institutions and processes, such as political parties and how a bill becomes law, with less attention focused on a broad range of social and political issues. Therefore, even when students indicate that they are encouraged to discuss issues openly develop an opinion about issues, the range of topics discussed may be limited.

The discourse community was also a predictor of the development of civic knowledge in both countries. According to Lave and Wenger (1991), social groups are central to understanding, interacting, and making sense of learning opportunities. From this perspective, discussions between individuals about civic issues can facilitate an understanding of abstract concepts and ideas, such as those purportedly tapped by the IEA Civic Education civic knowledge scale. At the same time, the complexity and depth of the issues discussed are unknown. It is quite possible that the association between the discourse community and civic knowledge would be even stronger if we knew more about the actual pedagogical practices of students' teachers.

The stronger relationship in both Australia and the United States between the discourse community and expectations for informed voting, compared to its association with civic knowledge, may indicate that engaging in open discussion may not always result in more challenging and thoughtful exploration of issues. If this is the case, it is crucial that teachers provide student opportunities to move from what may be superficial discussion to in-depth discussion about complex issues.

The statistically significant associations found between the discourse community and both of the capacities for civic engagement provides support for the utility of the communities of practice framework. The findings indicate that the discourse community in school plays an important role in the development of expectations for informed voting and civic knowledge, and they support Torney-Purta and colleagues (2006) extended notion of Lave and Wenger's concept of communities of practice as a learning process through which individuals identify, share, and develop a context for civic learning. The findings also

support Torney-Purta and Richardson's (2003) assertion that open discussion and dialogue among students on political and social issues contributes to the development of meaningful civic knowledge. At the same time, participation in the discourse community facilitates students' expectations about future political involvement, suggesting that innovative teaching strategies that emphasize student discourse can facilitate the development of adolescent capacities for civic engagement (Carnegie Corporation of New York & Center for Information and Research on Civic Learning, 2003).

School Characteristics. The absence of contextual effects in both Australia and the United States indicates that the discourse community has no identifiable effect on the development of students' civic capacities at the school level. This means that although individual student's beliefs about their opportunities to participate in the discourse community are associated with individual student's capacities for civic engagement, the beliefs of peers have no significant influence. One possible explanation for this finding is multicollinearity between the school-level measures of communities of practice. A second possibility is that students' opportunities to participate in the discourse community are limited to specific types of teachers or specific types of schools. For example, the relatively low ICCs for the two measures of communities of practice (0.03 to 0.07), though statistically significant, indicate that there is substantial variability within schools in how students experience each dimension. Moreover, it is also important to note that the school discourse community in the United States has a statistically significant relationship with civic knowledge before socioeconomic status and school size were considered. The results suggest that schools that enroll students from more economically advantaged households are more likely to provide students with opportunities to participate in positive forms of discourse communities. We will discuss the possible confounding effects of socioeconomic status later in this paper.

Relationship of the Participatory Community of Practice and Civic Capacities

Student Characteristics. Consistent with the finding concerning the discourse community, students in Australia and the United States who describe more positively the participatory community of practice in their schools have higher expectations to become informed voters and also demonstrate higher civic knowledge (Table 2). In both countries, the participatory community has its strongest association with students' expectations for informed voting (0.16 SD and 0.14 SD, respectively) and civic knowledge (0.05 SD in both countries). In other words, the participatory community has a relationship, similar to the discourse community, with each of capacity for civic engagement. These findings support the value of the participatory community in schools as a mechanism to develop students' civic capacities.

The associations between the participatory community and expectations for informed voting suggest that involving students in structured experiences to solve school problems or accomplish tasks supports the development of anticipated civic involvement. Although the IEA Civic Education Study does not provide details about the forms of participation in which students were engaged, it is possible that these forms of civic capacity can be fostered through a range of group activities, such as researching and discussing civic problems, participating in school governance, or developing and implementing action plans. When students are engaged in these types of learning opportunities they have multiple and varied ways to understand and practice how their own experiences and views of life can influence not only others in the group, but also how they can influence social and political problems. In addition, students may develop a clearer sense of civic identity and develop a stronger commitment to being an active participant in a democratic society.

The association between the participatory community and civic knowledge provides further evidence of the connection between civic-learning and civic practice, albeit the connection is weaker. Although the strength of the association with civic knowledge is the lowest in each country, this weaker association might be expected if the forms of participation that students experience are not directly related to civic knowledge and skills tapped by the assessment. Prior research on the influence of experiences

such as extra-curricular activities and service-learning and civic knowledge report mixed results (Perry and Katuba, 2001) which may reflect that the instructional purposes for these forms of participation vary substantially across activities. This study supports the belief that the participatory community of practice plays a critical role in the development of civic capacities in schools. Based on these findings, this study provides support for communities of practice as a way to understand the schools' role in educating for civic engagement.

School Characteristics. Contextual dimensions of the participatory community are associated with expectations for informed voting in Australia and the United States (0.20 SD in both countries), and civic knowledge in Australia (0.38 SD). Although there was a statistically significant contextual effect for civic knowledge in the United States, the effect was reduced dramatically and became non-significant after controlling for differences between schools in the socioeconomic background of students. The implication is that these forms of participatory community are more likely to be found in schools that enroll students from more economically advantageous backgrounds, particularly in the United States.

The models in this analyses suggest that the participatory community may be most beneficial for students when it occurs in a school setting (in the case of civic knowledge, the contextual effect is seven times the effect for individual perceptions of the participatory community). When schools provide students opportunities to work together to address real school problems or work collectively on activities, they appear to increase the likelihood that students will become active and civically engaged members of society. In both countries, a widely recognized participatory community of practice is associated with higher expectations for voting, whereas in Australia, the prevalence of the participatory community of practice is also associated with higher levels of civic knowledge. This latter finding might reflect differences between Australia and the United States in the instructional purpose of participation, particularly when participation is fostered broadly in a school.

Considering the evidence, this study supports the argument of Torney-Purta, Homana, and Barber (2006) that through multiple social practices students learn to interact and develop civic identity. Although the study does not provide evidence that students working together forge a common group identity that then influences the direction and outcomes of civic learning, it does provide some evidence that collective beliefs about the participatory community in schools can be an important predictor of civic outcomes. What is clear, especially given the contextual effects for expectations for voting and civic knowledge, is that when schools embrace the notion of the participatory community of practice, there are more powerful relations with civic outcomes. As such, the collective support for the participatory community in school would appear to cultivate a broader and more systematic conception of educating for civic engagement.

Role of Socioeconomic Background and School Size

Socioeconomic background. Overall, the study found a consistent association between individual socioeconomic background and the measures of civic capacity. Specifically, the study indicates that students from more economically advantaged backgrounds consistently have higher levels of civic knowledge and greater expectations for informed voting. These associations were among the highest for the student-level variables. At the same time, the participatory community of practice had associations roughly equal to or greater than the associations with students' socioeconomic status for expectations for voting. For both measures of civic capacities, however, perceptions of specific dimensions of communities of practice had statistically significant relationships even after controlling for family background.

The study also found consistent contextual effects associated with the average family background of students enrolled in schools. Students in schools that enrolled more economically advantaged students also had higher levels of the measures of civic capacity, beyond what might be expected given their

individual family backgrounds. These results, when combined with the results at the student level, provide strong evidence that students from economically advantaged backgrounds develop a stronger foundation for civic capacity in schools. This developmental advantage is the result of advantages associated with both their access to personal resources and school resources

The study also supports the notion that the relationship between socioeconomic status and civic capacities differs systematically between schools, but only for civic knowledge and expectations for informed voting in the United States. In general, students from higher socioeconomic status backgrounds in the United States have higher levels of civic knowledge. More importantly, there is no indication that school-level perceptions of either of the dimensions of communities of practice moderate the association between socioeconomic status and civic knowledge (Table 3). This study provides no evidence for the equalizing effects of communities of practice, at least not in terms of the acquisition of civic knowledge.

However, in the United States model, the slope for individual student socioeconomic status was found to vary among schools—that is, the average effect of student socioeconomic status is larger in some schools and smaller in others. The results in Tables 2 indicate that the effects of student socioeconomic status are higher in schools that enroll more advantaged students. In these schools, the coefficients for student socioeconomic status is approximately one third of a standard deviation ($0.19 + 0.14 = 0.33$ SD).

School size. School size has a minimal influence on the development of adolescent civic capacities in Australia and the United States. More specifically, students in large schools in Australia have greater civic capacities compared to students in smaller schools, although these differences are quite small. In the United States, there is a context control effect for school size suggesting that individual socioeconomic status has a smaller effect in a large school compared to a small school on the development of students' civic knowledge. One possible explanation could be that large schools are more economically diverse than small schools and this range of diversity may make a student's socioeconomic background less important in shaping his or her civic capacities. Although the contextual effect is small, examining more closely the influence of school size is still worth further investigation.

Conclusion

The central focus of this study is to understand whether and how communities of practice make a difference in the development of students' civic capacities. Based on the cumulative findings of this study, there is evidence that both student and school characteristics for the two dimensions of communities of practice influence civic capacities. Although the design of this study does not permit strong claims for causality, it does provide some support for examining communities of practice as a potential policy lever for the development of civic capacities in Australian and United States schools.

In both Australia and the United States, student perceptions of the discourse and participatory communities of practice play meaningful roles in the positive development of civic capacities. The influence of these two communities of practice is greatest with expectations for informed voting, but the significance of their association with both civic capacities demonstrate that individual student participation in these forms of communities could make a difference. Arguably, student participation in these forms of communities of practice depends on the extent to which these opportunities are available and students are actively encouraged to participate in them. In some schools, students will become involved in communities of practice regardless of the availability. In other schools students may require more incentive to participate. In many cases, participation in communities of practice is likely to depend upon individual teachers and the extent to which teachers create the type of learning environment associated with the dimensions of communities of practice.

Compared to the student level, communities of practice at the school level present a different pattern of influence on the development of civic capacities. The participatory community of practice has an influence on expectations for informed voting across schools within both countries, as well as on civic knowledge in Australian schools. There were no school contextual effects associated with the discourse community. However, as noted earlier, the absence of additional contextual effects may have been due to multicollinearity between student perceptions aggregated to the school level and the relatively small proportions of variance between schools captured by the measures of civic capacity or the variability of instruction within schools. Although there are fewer statistically significant associations for school contextual variables compared to individual student perceptions of communities of practice, the influence of the collective beliefs with civic capacities appears stronger than the influence of individual beliefs. This is evidenced by the association between the participatory community and civic knowledge in Australia. In these examples, all of the students within a school benefit from the collective influence of communities of practice, regardless of their individual perceptions and characteristics. These contextual effects suggest that broadly experienced dimensions of communities of practice may play a powerful role in educating adolescents for civic engagement.

Participation in the types of experiences represented by the dimensions of communities of practice provide opportunities for students to come together to openly discuss civic issues in a supportive environment, to understand and work with people who have different ideas about these civic issues, and organize to solve school and neighborhood problems that are relevant and important to them. In other words, communities of practice help to foster the types of knowledge, skills, and attitudes associated with functioning as a contributing member of society. Unfortunately, those students who have the fewest opportunities to participate in communities of practice are also likely to have the lowest levels of civic capacity, at least as measured by more than factual knowledge about government structures and national history. From the perspective of this study, these students will be ill-prepared to understand and address a broad range of political and social problems that they may confront as future citizens.

If the results of this study prove persuasive, administrators and teachers have a critical role to play in ensuring that students are provided the opportunities to participate in communities of practice. In both Australia and the United States, for example, there is a positive effect on civic knowledge when students report opportunities to engage in open discourse and dialogue. Yet, it is critical that these opportunities to participate in the discourse community are more than simply discussing issues openly and or being able to express opinions that are different from the opinions of another student. Teaching that facilitates more focused discussion on controversial issues can help students grapple with the social, political, and cultural forces that underlie these issues so that they are better prepared to understand and address these types of problems in society (Hess & Avery, 2008). In addition, there is support for multiple strategies including debates, dialogues, and discussion on a range of political and social issues to help foster deep inquiry, higher-order thinking, and rigorous questioning (Carnegie Corporation of New York & Center for Information and Research on Civic Learning, 2003). If discourse communities of practice are to promote positive outcomes for youth, administrators and teachers will need to build on these and other works, such as the work of Hess (2008), Westheimer and Kahne (2003), and Torney-Purta, Homana, and Barber (2006), each of which suggests that schools utilize new approaches to help students develop their abilities of critical analysis in order to promote action for responsive civic engagement.

The analysis also indicates the value of engaging in the participatory community of practice. Looking at both countries, students with more positive perceptions of the participatory communities in their schools have higher levels of civic knowledge. Given that a component of the civic knowledge test assessed students' skills in interpreting political information and understanding concepts of democracy (Torney-Purta et al., 2001), the findings for Australia in particular support previous research about the inextricable connection between active participation in real-world political and social issues and increased civic capacity in these areas (Billig et al, 2005; Kahne & Sporte, 2008: Melchior, 1999; Torney-Purta et

al., 2007). Similar results might be realized in the United States by administrators and teachers who embed meaningful civic instruction in the participatory opportunities provided students. There is also an association between student engagement in the participatory community and expected informed voting both in Australia (where voting is mandatory) and in the United States (where it is not). The presence of contextual effects in both countries suggest that participation in activities such as student government or working together to solve school problems increases student expectations to participate in elections.

Socioeconomic status has a clear influence on civic outcomes. In both Australia and the United States, students who come from high socioeconomic backgrounds, or attend high socioeconomic status schools, have advantages in their acquisition of all the civic capacities examined in this study, compared to students from less privileged socioeconomic backgrounds or schools. In addition, the cross-level interaction with informed voting in the United States suggests that a student's individual socioeconomic background plays a stronger role in the development of student civic capacities in high socioeconomic status schools than low socioeconomic status schools.

These results may seem disheartening, suggesting that establishing the types of discourse and participation consistent with communities of practice may be especially difficult in schools that serve low socioeconomic students. However, the study does provide evidence of the benefits associated with communities of practice, especially with the participatory community in both countries. These findings suggest that there is value in the characteristics embedded within communities of practice that may promote greater civic engagement in low socioeconomic status schools. In this sense, communities of practice may provide important support for more meaningful learning, positive development of identity, a sense of safety and belonging, and more positive forms of school and community participation in low socioeconomic schools.

In conclusion, it is prudent that schools find ways to promote the creation of communities of practice for civic engagement. We argue that achieving the greatest impact on the development of students' civic capacities requires a three-pronged approach. First, it is incumbent upon teachers, administrators, and policymakers to not only create the type of school environment that is conducive for communities of practice, but it is also necessary that they find ways to encourage students to participate in these learning opportunities. In this sense, it is important for schools to create an environment that promotes broad and effective participation in the dimensions of communities of practice throughout the school. Second, the value of the combined effects of participation in all communities of practice suggests that schools seriously consider providing a comprehensive range of communities of practice that involve discussion and real-world participation. Given current educational aims, which focus almost exclusively on a narrow range of academic outcomes, this will require refocusing the mission of the school through a set of innovative and agreed upon policies that promote conscious commitment to communities of practice. These policies could focus, for example, on evaluation and possible revision of mission statements; the focus of curriculum and instruction; frequency and quality of professional development; and inclusion of all school members, including students, in the decisionmaking processes. Third, and equally important, is support among members of the school community, parents, students, and educators alike, for securing action around the potential positive values and norms associated with communities of practice to promote the development of positive civic capacities.

Table 1: *Description of Variables*

School Level Variables	
Average Discourse Community of Practice in School	This IRT scale (CLIM, see Torney-Purta et al, 2001) was derived from six items and aggregated to the school level. 1. Students feel free to disagree openly with their teachers about political and social issues during class; 2. Students are encouraged to make up their own minds about issues; 3. Teachers respect our opinions and encourage us to express them during class; 4. Students feel free to express opinions in class even when their opinions are different from most of the other students 5. Teachers encourage us to discuss political or social issues about which people have different opinions; and 6. Teachers present several sides of an issue when explaining it in class. This scale was standardized within each country to mean = 0 and a standard deviation = 1. Missing data was addressed through listwise procedure. Australia α = 0.81; United States α = 0.82.
Average Participatory Community of Practice in School	This IRT scale (CONF, see Torney-Purta et al, 2001) was derived from four items and aggregated to the school level. 1. Electing student representatives to suggest changes in how the school is run makes schools better; 2. Lots of positive changes happen in this school when students work together; 3. Organizing groups of students to state their opinions could help solve problems in this school; and 4. Students acting together can have more influence on what happens in this school than students acting alone. This scale was standardized within each country to mean = 0 and a standard deviation = 1. Missing data was addressed through listwise procedure. Australia α = 0.76; United States α = 0.80.
Average School Size	This scale was primarily derived from full-time student enrollment in the school survey of the IEA Civic Education Study. Two proxy variables were used to impute values for schools with missing data on full-time student enrollment for this school size measure (full-time student enrollment in the 9th grade, and full-time teachers). Each proxy variable was correlated strongly with full-time student enrollment (r > .8) making these imputations reasonably reliable. For the few cases with missing data across all variables, the mean value for school size was used in the imputation. This scale was standardized within each country to a mean = 0 and a standard deviation = 1.
Average School Socioeconomic Status	This scale was derived by aggregating the student level socioeconomic status variable below for use at the school level. It was standardized within each country to a mean = 0 and a standard deviation = 1.
Student Level Variables	
Total Civic Knowledge	This IRT score was derived from the 38-item test of knowledge and interpretative skills (see Torney-Purta et al., 2001). It was standardized within each country to mean = 0 and a standard deviation = 1. Missing data was addressed through listwise procedure. Australia α = 0.90; United States α = 0.90.

Expectations for Informed Voting	This IRT score (see Husfeldt, Barber, & Torney-Purta, 2005) was derived from two items. 1. Vote in national elections; 2. Get information about candidates before voting in an election. This score was standardized within each country to mean = 0 and a standard deviation = 1. Missing data was addressed through listwise procedure. Australia α = 0.70; United States α = 0.79.
Discourse Community of Practice	This IRT scale (CLIM, see Torney-Purta et al, 2001) was derived from six items. 1. Students feel free to disagree openly with their teachers about political and social issues during class; 2. Students are encouraged to make up their own minds about issues; 3. Teachers respect our opinions and encourage us to express them during class; 4. Students feel free to express opinions in class even when their opinions are different from most of the other students 5. Teachers encourage us to discuss political or social issues about which people have different opinions; and 6. Teachers present several sides of an issue when explaining it in class. This scale was standardized within each country to mean = 0 and a standard deviation = 1. Missing data was addressed through listwise procedure. Australia α = 0.81; United States α = 0.82.
Participatory Community of Practice in School	This IRT scale (CONF, see Torney-Purta et al, 2001) was derived from four items. 1. Electing student representatives to suggest changes in how the school is run makes schools better; 2. Lots of positive changes happen in this school when students work together; 3. Organizing groups of students to state their opinions could help solve problems in this school; and 4. Students acting together can have more influence on what happens in this school than students acting alone. This scale was standardized within each country to mean = 0 and a standard deviation = 1. Missing data was addressed through listwise procedure. Australia α = 0.76; United States α = 0.80.
Student socioeconomic status	This composite scale was derived from 2 items. This scale was standardized within each country to mean = 0 and a standard deviation =1.

Table 2: *Mean Differences Between Analytic Samples in Characteristics of Students and Schools in Australia and the United States[4]*

	Australia			United States		
Civic capacities: student	N	Mean	SD	N	Mean	SD
Total Civic Knowledge	2,757	103.83	19.60	2,396	108.40***	22.28
Expectations for Voting	2,757	10.23	1.88	2,396	10.26	1.94
Communities of practice: student						
Discourse Community	2,757	10.17	2.07	2,396	10.57***	2.22
Participatory Community	2,757	9.93	2.08	2,396	10.13**	2.14
Additional variable: student						
Student SES	2,757	10.26***	1.78	2,396	9.92	2.14
Communities of practice: school						
Average Discourse Community	142	10.14	0.80	124	10.55*	0.86
Average Participatory Community	142	9.88	0.70	124	10.12	0.73
Additional variables: school						
Average Student SES	142	10.20	0.78	124	10.03	1.21
Full-time Student Enrollment	109	695.65	318.53	92	688.14	685.84
Full-time Teachers	104	50.35	23.51	92	42.29	35.61
Full-time Grade Enrollment	112	116.80	62.40	97	173.70**	211.18

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

[4] *n* is unweighted; means and standard deviations are weighted. Average discourse community, average participatory, and average student SES were aggregated from the student to school sample. Missing values for school size was estimated using teacher size and grade size or the mean of school size when missing these variables. Approximately 18% and 15% of cases used the mean for missing school size values in Australia and the United States, respectively.

Table 3: Association Between Students' Civic Knowledge and Expectations for Informed Voting and Students' Individual and Collective Perceptions of Communities of Practice in Australia and the United States

	Australia		United States	
	(*no controls*)	(*with controls*)	(*no controls*)	(*with controls*)
Civic Knowledge				
Fixed coefficients				
Intercept, γ_{00}	-0.05	-0.05†	-0.09	-0.11**
Discourse community of practice, γ_{01}	0.17	0.04	0.51**	0.19
Participatory community of practice, γ_{02}	0.33*	0.38*	0.44*	0.12
Average SES, γ_{03}	-	0.38***	-	0.77***
School Size, γ_{04}	-	0.05†	-	-0.02
Discourse community of practice slope, γ_{10}	0.09***	0.09***	0.07**	0.08**
Participatory community of practice slope, γ_{20}	0.05*	0.05*	0.05*	0.05*
Average SES slope				
Intercept, γ_{30}	0.22***	0.20***	0.21***	0.21***
Discourse community of practice slope, γ_{31}	-	-	0.00	-0.00
Participatory community of practice slope, γ_{32}	-	-	0.05	-0.01
Average SES, γ_{33}	-	-	-	0.04
School Size, γ_{34}	-	-	-	-0.05**
Expectations for Informed Voting				
Fixed coefficients				
Intercept, γ_{00}	-0.02	-0.02	-0.04	-0.07**
Discourse community of practice, γ_{01}	-0.07	-0.12	0.14	-0.04
Participatory community of practice, γ_{02}	0.18†	0.20*	0.32*	0.20†
Average SES, γ_{03}	-	0.14**	-	0.36***
School Size, γ_{04}	-	0.03†	-	0.03
Discourse community of practice slope, γ_{10}	0.18***	0.18***	0.16***	0.16***
Participatory community of practice slope, γ_{20}	0.16***	0.16***	0.14***	0.14***
Average SES slope				
Intercept, γ_{30}	0.15***	0.13***	0.19***	0.19***
Discourse community of practice slope, γ_{31}	-	-	-0.05	-0.11
Participatory community of practice slope, γ_{32}	-	-	-0.11	-0.17
Average SES, γ_{33}	-	-	-	0.14**
School Size, γ_{34}	-	-	-	0.01

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Notes: In Australia $n = 2,757$ students in 142 schools; the United States $n = 2,396$ students in 124 schools. Weighted by adjusted houseweight at level-1. Measures were grand-mean centered (except for SES which was group-mean centered at the student level).

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Table 3: Variance Components for the Association Between Students' Civic Knowledge and Expectations for Informed Voting and Students' Individual and Collective Perceptions of Communities of Practice in Australia and the United States

	Australia		United States	
	(*no controls*)	(*with controls*)	(*no controls*)	(*with controls*)
Civic Knowledge				
Variance components				
Intercept, u_0	0.12***	0.09***	0.21***	0.07***
SES slope, u_4	-	-	0.01†	0.01
Level-1, r	0.75	0.75	0.68	0.68
Expectations for Informed Voting				
Variance components				
Intercept, u_0	0.01†	0.00	0.04***	0.01**
SES slope, u_4	-	-	0.01*	0.01†
Level-1, r	0.80	0.80	0.75	0.74

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$

Notes: In Australia $n = 2{,}757$ students in 142 schools; the United States $n = 2{,}396$ students in 124 schools. Weighted by adjusted houseweight at level-1. Measures were grand-mean centered (except for SES which was group-mean centered at the student level).

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