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SCHOOL EFFECTS AND CIVIC KNOWLEDGE:

A CROSS-NATIONAL STUDY OF YOUTH POLITICAL SOCIALIZATION

A Thesis in

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ABSTRACT

From its earliest conception as an institution, formal public mass schooling, managed and financed by the nation-state, was developed with citizenship production as one of its chief goals and assumed contribution to national societies. Sociological analyses of the origins of mass schooling have observed the strong assumed link between education and citizenry held by a wide spectrum of political interests in creating social order within a national polity. Even though there is extensive sociological analysis of the origin of the institutional link between public schooling and citizenry production, there is little sociological analysis on how schooling produces citizens, and, in turn how that process is shaped by the nation-state and the world system of nations. Here I examine the micro process of schooling for citizenship, the effects of national income, and the global patterns in 27 nations with unique data on adolescents' civic knowledge. This dissertation is organized as follows: Chapter 2, reviews the historical roots of civic education and political socialization and literature on the school effect. Chapter 3 presents the multilevel comparative cross-national research methodology that links the different approaches to civic knowledge and the multilevel and cross-national context. Chapter 4 presents the data and measures. Chapter 5 includes models, results, and interpretation of the results. Chapter 6 provides a conclusion of this study. I found that schools apply different combinations of resources to equip their students with an understanding of how democracy works. Second, the variability on civic knowledge attributable to school is larger than what has been found in other academic subjects, such as mathematic and science. Third, in all countries, student background and expectations

explain more of the variability in civics achievement than school variables do, and fourth, less-developed countries do not have larger school effects than family background effects.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

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CHAPTER 1

INTRODUCTION

Political socialization of youth produced by mass schooling is indispensable for the success of modern democracies. Although recently there has been greater political and scholarly focus on the preparation of youth for the workplace, nation-states have long relied on mass schooling for the production of citizens through providing curricula on nation history and civics. Policy makers agree that both political socialization and human capital production are crucial for national development. The twin notions of training the child to be a productive adult and cultivating him to be a fully developed individual is an institutional hallmark of mass schooling throughout the world. An extensive literature documents a substantial association between educational attainment and civic behavior at the individual level. Individuals who have received more schooling in modern societies tend also to be involved in the civil society in their nation. This finding is well documented; we know little about how this occurs. Although there is a comparatively large literature on the role played by school quality in the production of human capital subjects like mathematics and science, we know far less about the role of school resources and quality in civics education. Mass schooling has spread worldwide, and has undergone a transforming revolution in quality of schools, yet we know little about what role this has had on political socialization across nations.

Only a few cross-national comparative studies have addressed the connection between school quality and political socialization of youth. Whether or not schooling

contributes to people's understanding of their national and global societies is a topic of enormous importance for the future. Unfortunately, political, ethnic, religious and economic conflicts continue to rage worldwide. Recent incidents in the Middle East and their unpredictable consequences for international order illustrate the importance of examining the dynamics of citizen production for both nations and global stability. Recent emphasis on technical human capital development would lead one to believe that the educational system worldwide is busy creating new scientists, technicians, and skilled workers—but is it also creating new responsible political actors? Are schools making good citizens? What do students know about how democracy works? How do nations produce citizens through the educational process?

The macroscopic literature on nation-states, citizenship and mass schooling since 1975 suggests a link between the importance of schooling and youth socialization. But a lack of comparable and extensive cross-national data over the past 25 years has precluded closer study of the role of school and the specific dynamics of citizenship production between and across nations. The first International Education Association (IEA) study addressing civic knowledge as a measure of socialization was conducted in 1971; its goal was to discover the extent to which schools were producing well-informed and democratic youth. In terms of cross-national variations, it was not possible to carry out either multivariate analysis, because of the small number of countries (10).

Data

The Civics-99 data offer a unique opportunity to investigate the school effect on civic knowledge cross-nationally. The International Education Association (IEA)

conducted the second cross-national civic education study in 1999. It is a survey of 14-year-olds, mostly attending eighth grade, to see what they know about democratic practices and institutions. The study assesses knowledge of democratic principles, skills in interpreting political communication, concepts of democracy and citizenship, expected participation in civic-related activities, and attitudes related to trust in institutions, the nation, opportunities for immigrants, and women's political rights. In addition to Civics-99, I use the World Bank data on national income and the income inequality index.

Research questions

The main issues addressed in this thesis are:

- Are there cross-national patterns for organizing civics education through schools?
- What is the relative effect of school characteristics compared to effects of student and family characteristics on civic knowledge?
- Do school effects vary in type and strength across nations?
- Do national socioeconomic characteristics moderate or enhance the school effect in citizenship knowledge and skills?

These four research questions lead to three testable hypotheses:

Hypothesis 1a: *Given global institutional patterns of standard civics curricula, there will be considerable cross-national isomorphism among teacher quality and opportunities to learn allocated to civics in schools.*

Hypothesis 1b: *Schools will show considerable within-nation isomorphism in teacher quality and opportunities to learn allocated to civics.*

Hypothesis 2a: Students' individual and family characteristics have a larger effect on political socialization than school resources do.

Hypothesis 2b: *Given the global spread of civics education, with more standard curriculum and instructional resources, school resources do not vary in type and strength across nations.*

Hypothesis 3: *A world revolution in funding, enrollment, and mass distribution of schooling now yields a smaller or insignificant association between national socio-economics characteristics and national levels of civics achievement among students.*

Models

Civics education is fundamentally dissimilar to education in the so-called hard sciences-students are exposed to political issues outside the classroom; not only teachers, but parents and peers express opinions about politics as a matter of course, which is less likely to happen with subjects such as chemistry. Niemi and Junn (1998) argue that there are two general sets of characteristics explaining how students learn about civics: exposure and selection features. They state that in order to be "politically knowledgeable, students must be exposed to political information and value it sufficiently to select it for retention" (Niemi and Junn 1998, p. 54).

Torney-Purta et al. (1999) model civic knowledge using both ecological development and situated cognition theories. Bronfenbremer (1979) conceptualizes human development as a nested structure that is hierarchically influenced by macro-level

and proximal settings. Thus, Bronfenbremer defines the development as a joint function of person and environment (Bronfenbremer 1988). Based on this learning theory, Torney-Purta et al. (1999) identify as significant the influences on individuals that come from outside the school: family, contact with peers, and other individual contact all the way up to the mass media and broader cultural history of the society in which the student lives, including religion and ethnic or economic stratification.

The modeling strategy used here is the Hierarchical Linear Modeling (HLM). Data is adjusted for differential representation, and in order to gain precision, the estimation of variance takes into account the data structure. Hierarchical linear models are appropriate here because I am interested in estimating the effects of schools and national characteristics at the individual level. In other words, the parameters estimated at the student level become an outcome variable for school parameters (Raudenbush, 1986). This modeling technique takes into account the problem of design effect introduced by the correlation among students' answers collected from students nested in schools (Goldstein 1987, 1991; Raudenbush and Bryk, 2002). In this analysis I estimate HLM coefficients with student achievement in civics knowledge, where the outcome variable is civic knowledge score.

At the student-level the model includes demographic characteristics, student's expectations, socialization inside school, and socialization outside school. The school-level dimensions include social composition of the school, teacher quality, opportunity to learn, and the school as organization and that are hypothesized to have an impact on civic knowledge achievement. The national-level dimensions are: gross domestic product per

capita (GDP), as a measure of economic development per country, and a measure of income inequality (Gini).

The remainder of this dissertation is organized as follows: Chapter 2, reviews the historical roots of civic education and political socialization and literature on the school effect. Chapter 3 presents the multilevel comparative cross-national research methodology that links the different approaches to civic knowledge and the multilevel and cross-national context. Chapter 4 presents the data and measures. Chapter 5 includes models, results, and interpretation of the results. Chapter 6 provides a conclusion of this study.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

We live in the age of nanotechnology and high-speed communication, we also find ourselves in an era of worldwide political, ethnic, religious and economic conflicts. It is significant that during the last decade alone, the United Nations Peacekeepers participated in 34 serious conflicts — wars, civil wars, genocide, religious disputes — in the five continents. The instability of the international order warns us of the importance of citizen development through mass schooling.

Even though the origins of civic education are difficult to establish precisely, it has been known since antiquity that education transmits culture. In this chapter I trace global trends in mass education that relate to political socialization and to the history of civics education. To do this, I first present milestones in the history of civics education as a central educational goal. Second, I describe the evolution of political socialization, as a scientific concept, especially as it directed at children and youth. Third, I describe two ways that trends in civics education have spread worldwide: through *educational travelers* and other through international organizations. Fourth, I discuss the main theories about the effects of mass education on society. Finally, I discuss the similarities and differences seen cross-nationally when civics instruction is introduced into mass education curricula.

From Civic Education to Political Socialization

Many scholars throughout history have reflected on the connection between civic education and education per se. Common for all their conclusion is the idea that education translates into useful collective behavior on the part of the youth (Kant 1904; Dewey 1916; Durkheim 1956). Civic education is important both for individuals and for society, therefore it has been a major concern of modern education. Cogan et al (2002) define civic education succinctly as: "essentially a normative concept, describing an educative process by which young people become informed and active citizens in their society" (Cogan et al., 2002: 3).

The idea of civic education was first developed by Greek philosophers in antiquity (Dewey, 1916). Philosophers have sought answers to questions about basic political realities of society, and have seen education in civic matters a one key transforming process. Reflections on the appropriate organizations of modern societies have led to multiple conclusions about what is the appropriate form for civic education to take. The ancient Greeks philosophers, who believed that the *harmonious* man represented the ideal for society had clearly-assigned roles and functions for family and educators: the *pedagogue* belonged to the family and taught moral and ethical development; on the other hand the *master* was an external figure and he taught reading, arithmetic, and musical knowledge. Plato and Aristotle believed that the aim of education was inseparable from citizenship; they and other philosophers initiated a tradition where the function of education was to create citizens, and a citizen was one who had developed his capacities harmoniously, cultivating both the intellect and moral sensibilities.

Education has had different aims throughout history; but transmitting civic values, even implicitly, has always been part of all educational aims (Brubacher 1947).

The production of good citizens has not always been the first and emblematic aim of education. The product of civic education, the citizen, has been seen both as an ideal and a counterexample of what is good. Plato argued that it was necessary to educate the city in order to educate the individual (Palmer 2001), but for Rousseau it was the other way around. Rousseau (1712-1778) held an individualistic conception of education without neglecting the importance of social relationships. He thought that a child first required "virtue in all that which relates to himself" and these virtues were anterior to any social function: "You must choose between making a man and making a citizen, for you cannot do both at the same time." (Rousseau 1979). The fruit of Rousseau's thought, the concept of child-centered education, dominated discussions of educational philosophy for many years. Other philosophers, such as Herbart (1776-1841) and Hegel (1770-1831), stated that education should be centered on universal principles and not only focused on individuals (Brubacher 1947).

The importance of civic education has been central to the development of educational aims. As industrialization and the development of communications greatly expanded the volume of travel, and the exchange of ideas between countries. Thus, civic education has influenced process of borrowing educational ideas among countries. *Educational travelers* played an important historical role in globally disseminating innovative thought throughout educational systems globally. During the nineteenth century, certain elites tried to adopt foreign cultural projects (Meyer et al. 1992). The importance of the way that youth of other countries understand civics has been

recognized since the beginning of comparative study of civic education. For example, in 1817, Marc Antoine Jullien's *Plan and Preliminary Views for a Work on Comparative Education*, in which he suggested that comparative education was necessary to learn about how other societies work.

Jullien's work was the starting point for a number of scholars, politicians, and teachers who traveled around the world in hope of improving their native educational systems. Fraser and Brickman (1968) compiled sixty-nine reports of international and comparative education written between 1785 and 1902 by educational travelers, government officials, students, and others. The majority of reports are related to education in Europe and the United States, covering a wide variety of topics including schools, seminars, universities, primary school, high school, and religious and military education.

Despite divergent views, civic education became inseparably bound up with the evolution of education as an institution. Not until second half of the twentieth century did a concept of political socialization emerge. Thus, unlike civic education, political socialization is a relatively new concept, developed by political scientists to understand how youth become politically active. This concept was first articulated by Hyman in 1959, as the process of inducting youth into political culture. Hyman found that children were ignorant of political participation, and that "attention given to politics as a consequence of socialization is almost completely lacking" (Hyman 1959:26).

Atkin and Gantz (1978) define political socialization as "a developmental process by which adolescents acquire cognitions, attitudes and behaviors relating to their political environment" (Atkin and Gantz 1978:184). Yet there is dispute within the political

socialization literature over the single best way to explain the socialization process. Hess and Torney (1967) conceptualize four models of political socialization, all of which treat the school as an important disseminator of civic knowledge: accumulation, interpersonal transfer, identification, and cognitive development. They argued that these models apply to different steps of political socialization: the accumulation model provides an explanation of how schools teach the foundations of governmental process; the interpersonal transfer model is useful for explaining political systems to children for the first time; the identification model is suited to the explanation of party affiliation; and the cognitive model is useful for understanding how youth assimilate concepts related to the political process. Initial studies of political socialization focused mainly on issues of international stability during the postwar and cold-war eras. The majority of the literature models the impact of socialization agents, such as families and schools, and youth's civic values, attitudes, and knowledge.

Not only philosophers and scholars have addressed the importance of civic education and its connection with the school system, but international governmental organizations have also been formed to share ideas about schooling among nations. These organizations have had an effect worldwide (McNeely 1995). Global trends in mass education are connected with civic education and political socialization. One of the most influential international organizations over the last 50 years has been the United Nations Educational, Scientific, and Cultural Organization (UNESCO). This UN special agency, founded in London in 1945, was created to promote peace and better understanding among nations. As its constitution says, "That since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed" (UNESCO 2003).

Thus, UNESCO started providing technical assistance to educational reform programs worldwide. The mechanism of diffusion had a clear aim, and it was declared that "all the nations must fulfill in a spirit of mutual assistance and concern" (UNESCO 2003).

UNESCO has had an increasing influence in disseminating the content of civic education across nations. Rauner (1998) shows that, during the second half of the twentieth century, countries have changed from a worldwide model of national civics education to a worldwide model of global civics education (Rauner 1998).

Global trends in mass education and possible cross-national similarities and differences

Mass schooling has become, in the past one and a half centuries, the main conduit by which civic knowledge is brought to youth. In this section, I address the development of mass schooling and its relationship to the growth of the nation-state as the dominant political agent in the modern world.

During the nineteenth and twentieth centuries, the role of the citizen expanded as a result of the development of nation-states, and also in reaction to a number of other Western institutions and ideologies (Tilly 1997). A new international order created the social role the citizen as the predominant actor in the society (Ramirez & Weiss 1977; Boli 1979; Meyer et al. 1997). In modern society citizenship is a globally recognized, common role and a socially constructed category applied to individuals by élites of various nations and states (Barbalet 1988; Soysal 1994).

Institutional theory states that a common global culture developed and disseminated a common model of society worldwide (Dimaggio & Powell 1987; Meyer & Jepperson 2000). In this context, education is a highly developed institution that restructures whole populations, creates and expands elites, and redefines the rights and obligations of the members of society. Mass state-sponsored education took place worldwide as a part of nation-building strategies. The expansion of education not only creates the role of citizen but also extends citizenship as a link between the individual as agent in the nation state, and thus extends real participation in the state to marginal segments within societies (Benavot 1989). As a result nearly all people attend school, and it is assumed to be the "correct and natural" process by which citizens are made equipped with skills and knowledge about the political process that enables them to participate. Schools have a powerful socializing effect on students by virtue of their institutional authority (Meyer 1977).

Given this, an institutional hypothesis on schooling citizenship is that there are strong connections among the nation-state, mass schooling, and citizenship. Condorcet (1743-1794) claims that "public education is a duty of society to its citizens"; with this sentiment he started the discussion about providing formal education not only to the children of the elite. He thought that education was indispensable to being a citizen; citizens were indispensable to the society; and consequently primary education must to be compulsory. Two hundred years later, in the face of considerable opposition, mass schooling and mass enrolment are institutionalized worldwide: only 20 out of 190 countries worldwide have not implemented compulsory education (UNESCO 2003).

Secondary education has been rapidly expanding among developing nations as well since the end of WWII (Baker and Holsinger 1996).

Mass education has been analyzed in terms of economic, sociological, and political theories. Ramirez and Meyer (1980) summarized literature on these three areas, all of which seek to identify the origins of mass education. The first states that mass education is a consequence of the demand of human capital. Industrial production needs qualified workers, and these are produced by education. The second postulates that mass schooling expanded as a consequence of social differentiation. The third claims that mass schooling is created through a rational process in which political life is centered on the citizen.

Ramirez and Meyer (1980) conclude that mass education is the result of many factors, which are mainly bound together by the political construction known as the nation-state. In addition, Meyer, Ramirez and Soysal (1992) argued that mass education in the West has four distinguishing features: it is focused on the individual (as all individuals aspire to be members of society); it is secular; it has a standardized curriculum; and it links individual curriculum with the progress of the nation-state.

The following section shows the connections among mass schooling, civic education, and political socialization. First, I illustrate that mass schooling and civic education have very different historical roots; second I show some national examples where teaching civics has had an important role of political change. Third, I provide some evidence about different status that teaching civics has in school systems.

First, while the concept of civic education has been an idea guiding human relationships for some time, mass schooling is a comparatively new institution, a product

of modern nation-states during the nineteenth century. Hence in some countries civic education took place before mass schooling. For instance, consider the cases of three countries with different cultural traditions, in three continents: Greece, Chile and Australia. In Greece, for instance, the schooling rate in 1875 was only 20.3%, although the importance of civic education had been established long before, as a Greek historian explains: "Historically, the central discourse about education from the 1820s onwards conceives the whole of the educational process as designed to prepare future citizens" (Makrinioti & Solomon 1999: 292). In Chile, only 18.7% of Chilean children attended school in 1875, and the government's involvement in education was limited to elite secondary schools, which were the only institutions to offer civic education as a major subject (Labarca 1935). In Australia the idea of educating students to be good citizens dates to the foundation of the Australian colonies in 1901. In this case, political socialization of youth took place in a system where mass schooling had been achieved.: By 1875, about 90% of Australian children already participated in the public school system (Print et al. 1999).

Second, during the early years of mass education, the purpose of civic education was to prepare youth for participation as members of a mass political society. It is also used for this purpose when nations experience change in their political regimes. Many countries, after achieving universal education, have changed their political educational goals, and civic education has been an instrument of the new ideology. For some countries this is explicitly mandated by rules and laws. For instance, the Romanian Communist regime had a heavy civics agenda. The 1975 *Program of the Communist Party* said,

> It has been historically confirmed that the socialist democracy is absolutely superior to the capitalist one which merely proclaims formally some democratic rights but does not provide the material conditions or the required social framework for their fulfillment (cited by Bunescu et al 1999: 507-8).

A broad agenda was similarly articulated more recently in Lithuania [The Law of Education in the Republic of Lithuania, 1991]:

> Civic Education is considered to be one of the essential goals of the educational system: to foster citizenship, the understanding of a person's duties toward family, nation, society, and the State of Lithuania, as well as the need to participate in the cultural, social, economic, and political life of the Republic (cited by Zaleskiene, 1999: 422).

In other countries the changes in political ideology are not explicit but are enacted though the educational system. In Chile, Twentieth-century, changes in the educational system have been intimately related to the political ideology of the party in power. In the four years from 1969 to 1973, Chile underwent three shifts in governmental ideologies: from moderate, to left wing, followed by a right-wing military coup d'etat. Thus while the socialist regime, tried to develop one main public school system, the military government implemented an educational market, where public, chartered, and private schools competed for enrolling students.

Curricular changes are not only associated with extreme or violent regime changes, as civic education has been used to prepare citizens for major geopolitical changes. This is the case of Hong Kong where the study of Government and Public

Affairs (GPA) was introduced to public schools in the 1980s. This is the case of Hong Kong, thus the curriculum shifted in preparation for governmental return to Chinese rule.

Other countries that are more politically stable introduce civic education in the discussion of modern citizenship. For instance, in Portugal there has been intense debate over the content and purpose of civic education. Since the 1980s the debate has been centered on whether or not schools should teach values, national identity, AIDS awareness, and human rights (Menezes, 1999: 487). In Russia, the definition of civic education has changed over time, from being virtually synonymous with the study of law to a modern idea of "civic culture" covering non-state-related issues such as personal conduct and civil society. All of these developments have taken place in countries with mass education systems, showing that while civic education depends on the political ideology and becomes part of political socialization process, the trend towards mass schooling follows a worldwide institutional path, which has been independent of ideological changes.

Third**,** civic education has been part of formal education, but not always a school subject in its own right. It changes in response to different traditions. In many western societies, the church directed popular moral and civic education, thus civics as a specific subject in school was not necessary. For instance, in the Czech Republic, civics education was introduced as a subject in 1921(Válková & Kalous 1999:185), when 67.8% of children attended primary schools (Benavot et al.1989). Suddenly in 1923, in response to political changes, "elementary teaching" and "national history and geography" were added to the Czech civics curriculum. In Israel the variety of cultural mutually hostile

factions makes a unified educational program in citizenship impossible, and as a consequence civics is not taught as a separate subject in elementary schools.

Other countries not only lack civics education as a school subject, but they explicitly disavow it. In England, there has never been open support for an individual school subject called "civics" (Kerr 1999: 204). The goal of British education is to shape character; civic awareness is thought to follow from this. Consider Margaret Thatcher's statement, "There is no such thing as 'society'. There are men. And there are women. And there are families" (in Kerr 1999: 207).

This British tradition was inherited by Australia, a former British colony, where civics education has shown an irregular importance in the formal curriculum. It did not start as a distinct part of the curriculum, however, until the 1930s and 1940s—it was part of "history and moral training" (Print 1999: 38). Civics never really developed a distinct identity as a school subject, thus its importance in Australia declined until it almost disappeared in the 1960s. Interest revived by the late 1980s, and courses in government, commerce, and legal issues were offered in New South Wales. The teaching of civics in another British colony, Hong Kong, began when civics was "first offered as an examination subject in 1950" (On 1999: 315). Two years later, geography, history, and civics were combined into "social studies" (On 1999: 315). In 1965 Hong Kong's civics education was replaced by EPA (educational and public affairs). One aim of EPA was "to enable pupils to be well-informed and to become civic-minded enough to act as good citizens in the larger community to which they belong" (On 1999: 315).

This section discussed how the transmission of civic values has evolved from a family matter to an academic subject. Because mass schooling is ubiquitous in modern

societies, schools are agencies for transmitting civic knowledge and conduits of political socialization.

School Effects and Civics

In this section, I first review the literature addressing school effects and the major findings concerning school versus family background. Second, I discuss alternative research where school variables are found relevant in explaining achievement. Third, I discuss the major studies on achievement on civics. Finally I describe the difference between school effects and schooling effects. In our day, there are some terms in education that are used indistinctly, such as teaching, instruction, training, schooling and education itself, to mention a few. The imprecise use of these concepts has led to confusion and the interchangeable use of the terms schooling effect and school effect (Baker and LeTendre 2005).

Most of the literature does not make in explicit the distinction between schooling effects and school effects. Schooling is provided by an agency called school, and the action of attending school produces effects upon the student. The effects could be measured by comparing people who attend school to people who do not. Baker & LeTendre (2000) note that this kind of research comparing *school versus no school* is difficult because schooling has expanded worldwide and as a consequence there is practically no unschooled society. *School effects* could be understood from various perspectives. If we use an economic rationale, then the criterion would be "productivity." This is not unreasonable because the preparation of youth for the workplace has become the main goal of many educational reforms. Policy makers agree that human capital

production is a key to national socioeconomic development; as a result national curricula have trended to promote scientific knowledge and practical skills through the school system. There is a common belief that mathematics and science deserve more attention than other academic subjects. Chromy (2002) reviews of fifteen international comparative studies conducted since 1964. In nine of them the main focus is on mathematics and/or science; in five, on reading; in one, computer skills; in one, pre-primary education; and in two, civics.

Common sense indicates that some schools are better than others. Why does school A do better than school B? This intriguing question that has challenged social scientists for the last three decades. Thus emerged the concept of the school effect, commonly operationalized by the question: are differences among schools related to differences among students' achievement? The term achievement is defined in surprisingly few educational reference works, though the general topic of achievement is often presented (Cizek, 1997). Sorenson and Hallinan (1977) define the amount of learning achieved as "change over some time interval in an individual's knowledge, skills, or values." The *Handbook of Research on Improving Student Achievement* (Cawelti, 1999), uses a broader definition of achievement, identifying research-based practices "that lead to improved achievement in concepts, values or skills." Cawelti (1999) admits, however, that most studies rely on "more traditional kinds of testing of knowledge and skills", i.e., standardized test results in cognitive areas of knowledge and skills. Glaser and Silver (1994) find the theory underlying the assessment of academic achievement "less explicit" than that of selection testing, further noting that "achievement testing has generally lacked adequate psychological theories of human competence and

performance, which can provide a foundation for the assessment of achievement." However, they find that theories underlying achievement had matured since the mid-twentieth century's behaviorist focus to include measurement of complex processes of thought, reasoning, and problem solving.

The landmark school effects and achievement study, known as the Coleman Report (Coleman et al. 1996), revealed that school characteristics account for 10 percent of the variance of among students' achievement performance. These results were broadly misinterpreted as meaning that the schooling does not matter, or only matter a trivial amount. Coleman and his colleagues conducted a large study including more than a half-million students attending 1st, 3rd, 6th, 9th, and 12th grades. They found that the most important predictors of achievement were home background and student attitude. It provided a rationalization for minimizing the school's role as an agency of social equalization. In terms of sociological theories of education, it was evidence contrary to the functionalist theory, which views schools as agencies where youths are socialized and allocated. The most important factor of this process, according to functionalist, is student ability; thus more capable people succeed in school and then their services are highly valued in the job market (Riordan 1997).

Others studies confirmed what Coleman and his associates had found. For instance, Jencks and Brown (1972), using data from Project Talent, find that "[c]hanges in high school characteristics" are "unlikely to change high school effectiveness." They argue that "good" and "bad" schools are commonly recognized, but criteria of goodness and badness are not generally agreed upon. Resources *alone,* or advantaged classmates *alone,* are not sufficient indicators of what makes a school good or bad. In addition, in

terms of school effectiveness, the authors find that nothing—neither teacher training nor class size, for example -seems to boost cognitive growth between 9th and 12th grades-. In terms of accountability, to complicate things further, the literature warns that high school students whose scores rise on one test do not necessarily score higher on another test (Jencks & Brown 1972; Kostakis 1987).

A significant number of studies conclude that school has but small influence on student achievement, and they attribute to the student's family characteristics a large portion of the variance explained (Hoxby 2002; Marzano 2000; Scheerens & Bosker 1997; Creemers 1994; Rowe & Hill 1994; Bosker 1992; Bryk & Raudernbush 1992; Stringfield & Teddie 1989; Mandaus 1979). Keeves (2001) concludes that measures of students' socioeconomic status are positively related to achievement in all countries, at all age levels, and for all subjects (Keeves 2001).

The amount of research on the school effect has been integrated by various scholars in form of meta-analysis. Buschmann (2002) reviewed 38 international studies on educational attainment and 20 on achievement, reporting that family socioeconomic status (SES) has a positive effect. Figure 2.1 shows the percentage of variance explained by SES in eleven selected studies. These studies show that SES explains the major portion of the variability in students' performance. They suggest that there is small room for factors other than SES in explaining students' achievement.

These results portray a pessimistic scenario for those who support the widespread belief that schools are important for equipping people in the area of cognitive development. The results seem to support what conflict theory states: that education reproduces social inequalities. Social class, race, and gender become the significant

characteristics which allocate people into one position or another in the society. Thus individuals have their attainment predetermined by the social structures and not by their abilities (Kerckhoff, 1976).

Sorenson and Hallinan (1977), noting that a large body of research had failed to establish large school effects on student achievement after controlling for family characteristics and individual ability, criticized this research for not "specifying the mechanisms that would produce such effects," and found the theoretical rationale "lacking". Setting out to reconceptualize school effects, they criticized nearly all research in educational sociology and psychology for focusing entirely on individual determinants of learning and particular aspects of teacher behavior and methods, and implicitly excluding as trivial the amount of material communicated in the teaching process. This *opportunity to learn* includes teacher behavior and methods, they argued, as well as *curriculum organization and the amount of time spent in teaching* (Sorenson and Hallinan 1977).

Other lines of research have suggested that school characteristics do matter in student achievement (Brookover et al. 1979; Mortimore et al. 1988; Rutter 1983). The Coleman Report stirred up great debate over the connection between education and social mobility, yet the question remained: Do schools make a difference in student achievement? Since the variable of interest is to estimate the effect, if any, of the school, Chubb and Moe (1990), using the same data that Coleman used, create a set of variables that model the school as an organization. They found that effective school organization is a strong predictor of students' performance, comparable in magnitude with the effect of family background.

In a comparative study, Heyneman and Loxley (1982) reanalyzed the IEA study on science education. The IEA study's conclusions were consistent with those of Coleman et al. (1966), but only those variables that were counted as significant across all countries were included in the analysis. Heyneman and Loxley reanalyzed the data country-by-country and found different results: in poorer countries, the variance due to school effects is explained better, and the increase in explanation increases with the poverty of the nation. Such is the case with low-income countries included in the IEA study: Iran, Chile, India, and Thailand. Although the results are mixed, they support the idea that school quality has a greater impact in poorer countries. The basic argument of Heyneman and Loxley (1983) is that more-developed countries provide universal education, consequently the school effect is invisible; Good and Brophy (1984) call this phenomenon the absolute effect of schooling.

Baker et al. (2002) find that the Heyneman-Loxley effect, which was consistently shown in cross-national research in the 1970s, had largely disappeared by the mid-1990s. Baker et al. conclude that there are:

> no significant cross-level interactions between GDP per capita and family-background or school resource predictors, meaning that the effects of family background and school resources do not vary significantly across countries with different levels of economic development.

Family-background variables were found to be “much more significant predictors of student achievement than school resource variables”, even after controlling for the quality of school resources and national levels of economic development.

The literature on school effect suggests that achievement orientation, educational leadership, frequent monitoring, opportunity to learn, and cooperation are the most important factors on student's performance (Scheerens 1997). Table 2.1 displays Scheerens' synthesis showing the factors producing effects in student's achievement and their components as well.

Among the nine factors that impact the student's achievement, effective learning time is one of the most studied. Several cross-national comparisons of instructional time and content have been made; some are reviewed here and more are listed in the references. Some studies used length of the school year or school day as a variable for analysis, while others focused on time dedicated to specific curricular topics, such as physics, language arts, or mathematics. Farrell (1989), along with Heyneman & Loxley (1983) and Fuller & Clarke (1994), reviewed the school effectiveness literature in the developing world.

The research on instructional time is synthesized by Fuller (1987) using the general findings of the literature on instructional time and achievement. Table 2.2 presents a summary of studies where some measure of instructional time—total daily hours of instruction, or days per year of instruction, or curriculum-specific time allotment—is hypothesized to increase achievement. Size effects are rarely reported, thus a plus (+) or minus (–) sign indicates the direction of effect. The methodologies were not strong enough to support very subtle or detailed conclusions.

Although Fuller (1987) does report effects, they tend to be modest in size. Furthermore it should be noted that many of the reviewed studies were done at a time of larger disparities of educational resources within developing nations than is common now

(Baker et al., 2002). For example, in the TIMSS data, students attending math class for 5 hours or more during the week score 485 on achievement tests, while students who receive less than two hours of math per week score on average of 481. About 90% of the students receive between 2 and 5 hours of math class and they get on average 491 points on the math achievement test. Evidently, more hours of math class does not automatically result in better achievement scores cross-nationally.

Another factor which has been found important in school effectiveness research is teacher quality. It is widely recognized that good teachers produce a positive impact in schools (See Wenglinsky 2002; Wright, Horn & Sanders 1997; Sanders & Rivers 1996; Sanders & Hord 1994). Table 2.3 summarizes three meta-analyses of teachers' characteristics that impact students' achievement. One-third of the studies conclude that salary has an impact on students' achievement. About one-half of the studies concluded that teachers' education is an important factor in explaining the school effect.

School effects can also be understood from a political-theory perspective. An extensive corpus of literature has documented a strong correlation between educational attainment and civic behavior; this shows that one possible influence on the production of citizens is achieved through schooling.

The macroscopic literature on nation-states, citizenship, and mass schooling written since 1975 suggests a link between the importance of schooling and citizenship socialization. Milligan and Moretti (2003) provide an example of measuring the schooling effect. They find a strong relationship between schooling and voting in the U.S. Since they cannot measure the quality of voters' decisions, they measure (1) probability of voting, (2) correlation between education and quality of voter's information on

candidates and campaigns, and (3) education vs. degree of civic involvement. In the U.S., there is a strong effect of education on voter registration: registration levels are correlated to "education groups". In the UK, registration is compulsory and assisted, hence no correlation to education is likely to be found. According to Milligan and Moretti (2003), if the high school attainment had remained at 1964 levels, the US voter turnout would have been 10.4 to 12.3 percent lower in 2000. They conclude that high school improves citizenship; the estimated effect of graduation on voting suggests that high school graduates are more like to register to vote, to follow the campaigns, to follow public issues, and to volunteer, among other activities.

Even so, researchers like Milligan and Moretti (1999) do not consider the marginal impact of differing levels of school quality on citizenship production. Instead the interest is only in an effect of school attendance; the explanatory variable was the amount of education of individuals as measured by years of schooling. It assumes schools to be *black boxes*, and we do not know what specific school resources have contributed (positively or negatively) to the propensity to vote. In other words, we do not know what the school effect is.

Unfortunately, a lack of comparable and extensive cross-national data over the past 25 years has precluded closer study of the role of school and the specific dynamics of citizenship-production between and across nations. The first (IEA) study addressing civic knowledge as a measure of socialization was conducted in 1971; its goal was to discover the extent to which schools were producing well-informed and democratic youth. The study did show notably low scores for less-developed nations. In terms of cross-national variations it was not possible to carry out either multivariate analysis,

because of the small number of cases (10), or multilevel analysis, because this statistical tool was not developed at that time.

There are few studies comparing civics instruction to instruction of other subjects such as mathematics and science. In a pioneering study, Charles Merrian (1931) examines patriotism, civics training and national loyalty in the United States, Germany, France, Switzerland, Russia, Italy, and Austria-Hungary. Almond and Verba (1963) study political attitudes and democracy in five nations: the U.S., Mexico, Italy, Germany, and Great Britain. They interviewed about five thousand citizens of these countries. One of the things they hoped to understand was how political attitudes vary cross-nationally, as their statement of purpose indicates: "Our five-country study offers us the opportunity to escape from this American parochialism and to discover whether relations found in the American data are also encountered in other democratic countries…" (Almond and Verba 1963: 12). Holmes (1973) reports that the Kyush University *research of moral* is an outstanding example of comparative education research design. According to Holmes (1973), this study shows both the necessity of an interdisciplinary approach and, more importantly, it shows that the conceptual analysis facilitates empirical research. Using another form of inquiry, Gogan and Morris (2001) select case study methodology to study the development of civic values in five countries: the United States, Japan, Taiwan, Thailand, Australia, and Hong Kong. Hahn (1999) studies citizen education in six western countries, finding that 15- through 19-year-old students are more interested in politics when they have the opportunity at school to express opinions on public policy issues. Niemi and Junn (1999) estimate the school effect on political knowledge. They find that students who have taken civics courses increase their political knowledge 4

percent. The authors add that if the classes include a wide variety of topics, and if recent political issues are discussed, then the gain in political knowledge increases to 7 percent. Torney-Purta et al. (2001) study civic knowledge in 28 countries, finding that family background and family encouragement to continue in the educational system were the most important predictors of civics knowledge. School effect is measured through the classroom climate. Students who report that they study in an open classroom environment have higher scores than their counterparts in 22 out of 28 countries.

A notable exception is Ehman (1980), who attempts to measure school effects using National Assessment of Educational Progress (NAEP 78). The author reports that school qualities are related with the changes in political knowledge and attitude among American adolescents. Only slightly less pessimistically, Mourdochowicz et al. (1996) claim that civics courses have a small impact on secondary students.

Since political socialization is by definition a process, research on the topic turns perennially to the question of the relative effect of school characteristics on political socialization. Langton and Jennings (1968) found that civics as a school subject produces neither well-informed student nor more-engaged citizens. The authors reported, "[W]e found no one single case out of the ten examined in which the civics curriculum was significantly associated with students' political orientations" (Langton and Jennings 1968:866). Others found that schooling is much more effective in socializing students of low socioeconomic status than their wealthier counterparts (Hess and Torney 1967; Almond and Verba 1963). On the other hand, Niemi and Junn (1998) claimed that teaching civics classes produces students more knowledgeable in civics.

Table 2.1. Components of Effectiveness-Enhancing Factors

Factor	Components
Achievement orientation	- clear focus on the mastering of basic subjects - high expectation at school level and teacher level - record of student's achievement
Educational Leadership	- general leadership skills - school leader as information provider and coordinator - meta-controller of classroom processes - time spent on educational and administrative leadership - counselor and quality controller of classroom teacher - initiator and facilitator to staff professionalization
Consensus and cohesion Among the staff	- types and frequency of meetings and consultations - contents of cooperation - satisfaction, importance attributed to cooperation
Curriculum quality Opportunity to learn	- setting curricular priorities - choice of methods and textbooks - application of methods and textbooks - opportunity to learn - satisfaction with curriculum
School climate	Orderly atmosphere - The importance given to orderly atmosphere - rules and regulations - absenteeism and drop-out Climate in terms of effectiveness orientation - relationship between students, teachers, staff
Evaluative potential	- evaluation emphasis - use of evaluation results - monitoring students' progress
Parental involvement	- emphasis on parental involvement in school policy - contact with parent - satisfaction with parental involvement
Classroom climate	- relationship with the classroom, order, work attitude
Effective learning time	- time at school - homework - instructional time

Table 2.2. Sample of Effects, Within Countries, of Instructional Time on Achievement for Selected Developing Nations.

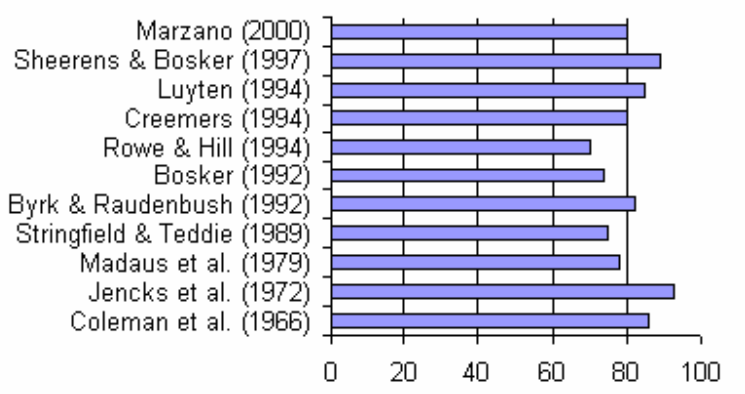
Country	Achievement or economic outcome measured	Setting	Direction of effect of Instructional time	Study (method)
Brazil	Comprehensive exam	Rural schools	+	Wolff, 1970
Brazil	Comprehensive exam	Urban schools	0	Wolff, 1970
Chile			+	Schiefelbein & Clavel, 1977
Colombia			+	Arriagada, 1981
Colombia (secondary sch)	Vocational knowledge	Hours spent on vocational instruction	+	Psacharopoulos & Loxley, 1986
India (primary sch)	Science		+	Heyneman & Loxley, 1983
Iran	Science		+	Heyneman & Loxley, 1983
Peru	Reading		+	Arriagada, 1983
Tanzania	Language & math (academic students only)	Class time spent on science and social studies	+	Psacharopoulos & Loxley, 1986
Tanzania	Language & math (academic students only)	Class time spent on language	0	Psacharopoulos & Loxley, 1986
Tanzania	Language & math (vocational students only)	Number of course periods in vocational area	+	Psacharopoulos & Loxley, 1986
Thailand	Science	Hours of instruction	+	Heyneman & Loxley, 1983
Thailand (secondary sch)	Mathematics		+	Lockheed et al., 1986

Source: (Fuller, 1987: 277)

Table 2.3. Impact of Teachers' Salary, SES and Education in Student's Achievement. Percentage of Positive Effects in 3 Meta-analyses.

Source	Explanatory variable	Positive impact (%)
Farell (1993)	Teachers' salary	31
Fueller and Clark (1994)	Teachers' salary	27
Hanusheck (1995)	Teachers' salary	31
Farell (1993)	Teachers' SES	70
Fueller and Clark (1994)	Teachers' SES	70
Farell (1993)	Teachers' education	58
Fueller and Clark (1994)	Teachers' education	57
Hanusheck (1995)	Teachers' education	56

Figure 2.1. Percentage of Variance Explained by Socioeconomic Factors on Student's Achievement.



CHAPTER 3

COMPARATIVE EDUCATION CROSS-NATIONAL METHODOLOGY AND POLITICAL SOCIALIZATION

Theoretical Issues

There is a great variety of theories on cross-national comparative education research. The diversity of theoretical models and the methodological conflicts that have arisen in the field of comparative education have produced a stimulating debate. For instance, Przworski and Tenue (1967) distinguish two approaches to measuring cross-national data. First, the nature of cross-national differences is qualitative; therefore, in-depth comparisons are not possible because countries are essentially different. Second, it is possible only to compare single identical indicators at a national level. Another classification is provided by Paultson (1994) who chronicles the shift, over the last fifty years, of theoretical traditions from the dominance of functionalism and positivism in the1950s and 1960s, to the emergence of radical functionalism, humanism, and radical humanism during the '70s and '80s. Finally, another comparativist, Epstein (1992), categorizes comparative education's theoretical traditions as positivist, cultural-relativist, and phenomenologist. Kandel (1955) emphasizes that historical analysis is a key component in comparing countries, and identified the principal religious, linguistic, geographical, racial, and political factors that policy makers should study when they do comparative analysis. Nicholas argues, "The new approach to comparative education implies that emphasis should be placed on the possibilities of prediction rather than on the search for antecedent causes." (Nicholas 1983 :20-21).

Olivera (1992) claims that comparative education faced a crisis during the 1960s when new approaches emerged that disrupted the general acceptance of Kandel's influence. Paultson (1994) states that comparative educators are departing from orthodoxies and allowing "new theories to emerge from often paradoxical combinations of existing theories" (Paultson 1994: 932). Margison & Mullis (2002) reject both universalism and relativism in comparative international education. Other scholars have addressed this debate from the point of view of the purpose of the research itself. According to Little (2000), it is necessary to make a distinction between studies for comparison and studies for development and planning. LeTendre (2002) goes directly to the nature of the comparative argument, explaining that a tension exists between those who seek cross-national forces acting on educational systems and those who study more specific characteristics of countries (or groups of countries) regarding political, economic or sociological issues.

Masemann, in her 1990 *Presidential Address to the Comparative International Education Society*, points out that the debate around comparative education has created two kinds of clients: academics and practitioners. Some practitioners working with policy implementation only grudgingly acknowledge that the intellectual efforts of the comparativists may someday be helpful. Psacharopoulos (1990) argues against comparativists' theoretical development, saying that comparative lessons are what really matter, not "wasting time over semantics." He suggests that instead of focusing on definitions and different approaches, comparativists should pay attention to practices that have been proven effective in education, regardless of which theoretical "hat" their

proponents may wear. Thus, theoretical approaches to conducting comparative analyses of international education are far from uniform.

This debate has not gone unnoticed by the IEA, one of the largest agencies conducting international comparative studies. Both Civics-99 and TIMSS studies have adopted advanced methods in comparative education and made available a significant amount of qualitative and quantitative data (LeTendre 2002).

The Civics-99 study deserves special attention, for it seeks directly to overcome the dichotomy between qualitative and quantitative studies. Torney-Purta (1999) recognizes the complexity of measuring political socialization of youth. The IEA started a two-phase study including a qualitative study (in the form of case studies) to reveal the "complex arrays of factors that potentially affect the transmission of knowledge and learning about citizenship, government and political process" (Torney-Purta 1999), as well as a survey testing individuals' knowledge and civics skills; the combined results create an international database useful for quantitative analysis.

The sheer number of theories and methods available for conducting comparative analysis complicates the process of selecting an approach for a particular research project. LeTendre (2002) recognizes the availability of multiple theories and methodologies, and clearly expresses the concern of the Civics-99 research team when he asks, "How could a suitable set of methods be selected that would facilitate a study of civic education in 24 countries?" (LeTendre 2002: 243)

Thus, for the purpose of keeping the studies in the proper cultural context, researchers working on the Civics-99 study were aware of the existence of multiple theories and methods available. Steiner-Khamsi, Torney-Purta and Schwille (2002) report

that the black-and-white world of theoretical dispute is becoming irrelevant in the effort to understand the political socialization of youth.

Comparative International Education Methodology

The central problem in comparative international education is that of identifying "equivalent phenomena and analyzing the relationships between them in an equivalent fashion" (Przworski & Tenue 1967: 553). This has been an issue, since the beginning of comparative education. Bereday (1964) divides the methods used in comparative education into three historical stages: borrowing (1817-1900), prediction (1990-1950), and analysis (1950-present).

Comparativists understood that description and borrowing of ideas from various schools were not sufficient to fully capture the essence of foreign educational systems. Bereday (1964) postulates that the second phase of comparative education started with Sir Michael Sadler, who in 1900 pointed out that each educational system is connected with the society (in Jones 1991). For Sadler, "things outside the school matter more than the things inside the school, and govern and interpret the things inside" (quoted in Bempechat, Jimenez, and Boulay, 2002: 145).

Civics and other subjects

Civics education is fundamentally dissimilar to education in the so-called hard sciences. This follows from the nature of civics itself: schools do not hold a monopoly

on the teaching of civics and the way of assessing civics should consider other contextual variables.

First, civics is different from other subjects because, while the rules of calculus and algebra (for example) are universally accepted, beliefs about what it means to be a good citizen vary across cultures, indeed, within families. Another difference between civics and natural sciences, is that beliefs about the civic behavior of people has an influence on their behavior as people. What does it mean? In physics, if somebody creates a theory about the relationships between mass and light velocity, this theory's truth or falsehood does not change the relationship between mass and light's velocity itself. Civics education is different because civics education may change our behavior. For instance, if the theory says that people have to be self-interested in order to have the best quality of life, and then if this theory is propagated, it may become a social belief. People will be self-interested not because it is better per se, but because it is official "truth," or at least the prevailing theory.

Postman, in *The End of Education* (1996), quotes physicist Niels Bohr to clearly express this idea: “The opposite of a correct statement is an incorrect statement, but the opposite of a profound truth is another profound truth” (in Postman 1995:11).

Second, civics education is different from other subjects in that youth are exposed to political issues outside the school; thus, the school and other institutions impact civic knowledge. Sorensen and Morgan (2000) argue that schools have a near monopoly on teaching some subjects, such as trigonometry, but in civics this is not the case. To isolate the school effect on civic knowledge is rather more complicated. Not only teachers, but parents and peers, express opinions about how the democracy system works as a matter,

which is less likely to happen with subjects such as mathematics, science, or language. Thus, teachers, parents, peers, and media somehow influence youth something about civics. According to Niemi and Junn (1998) there are two general sets of characteristics explaining how students learn about civics: exposure and selection features. They state that in order to be "politically knowledgeable, students must be exposed to political information and value it sufficiently to select it for retention" (Niemi and Junn 1998: 54).

Third, civics education is different in terms of assessment. Math and other subjects can use the intended curriculum as a basis for assessment (G. Steiner-Khamsi et al. 2002; LeTendre 2002). This is not the case of civic education. Torney-Purta et al. (2000) models civic knowledge using both ecological development and situated cognition theories (Miles 2002). Bronfenbremer (1979) conceptualizes human development as a nested structure that is hierarchically influenced by macro-level and proximal settings. In practical terms, this means that human development can be thought of as a joint function of the individual interacting with the environment (Bronfenbremer 1988). Building on this line of reasoning, Torney-Purta et al. (1999) identify as significant the influences on individuals that come from outside the school: family, contact with peers, and so on (at the individual level), all the way up to the mass media and broader cultural history of the society in which the student lives, including religion and ethnic or economic stratification.

What is comparable in civic education in different countries? Researchers have identified that cross-national comparison should take into account providing thoughtful inventory of methodological recommendations (Almond and Verba 1963; Chromy 2002; Edwards, Holmes & Van Graff 1973). From all of those recommendations,

methodological issues can be grouped into four clusters: first, cultural context, or what we are comparing; second, population definition, or who we are comparing; third, technical issues, or how we are comparing; and fourth, political issues, or what the political interest of cross-national is.

Cultural context. Unlike quantitative analysis, qualitative research attempts to understand the point of view of the informant . LeTendre (2002b) provides specific examples of how the point of view of National Project Representative (NPR) served as a cultural filter during Phase I of the Civics-99. For example, the Greek NPR revealed the importance of cultural identity in that country, while the Belgian NPR highlighted the fact that Belgium lacks a unified national identity (LeTendre 2002b: 268). Hambleton (2002) states that constructs do not necessarily have the same meaning cross-nationally. Translators are not always capable of finding flaws in test adaptation.

Test adaptation is an important issue in comparative education. Whether the test items are comparable across nations is a basic concern in international studies; in the case of civics it is even more important. International studies include countries with a number of different languages. Almond and Verba (1963) argue that one of the most "striking" problems in comparative research is the necessity of using more than one language. Tests must be adapted for each language, and poor translations may jeopardize comparability by producing instruments of varying difficulty. Levels of difficulty should ideally be equivalent regardless of the language the test is presented in. The problem of translation and its effect on the comparability has been widely studied (Holmes 1973; IEA 1999).

More recently, this issue has been addressed using statistical techniques. Whether an item has been adapted correctly or not can be tested by the Mantel-Haenszel technique (Hollad &Wainer 1993) or the method of Differential Item Functioning (DIF), when applied to empirical research, has shown that test items can be biased. It demonstrated that a test item may not necessarily be assessing what it is intended to assess (O'Neil & McPeek 1993). Erikan (1998) divides into three categories the problems related to translation: 1) differential in vocabulary; 2) differential in sentences complexity; and 3) differential in contextual meaning of the vocabulary. Erikan (1998) using DIF, found that IEA and IAEP studies have strong differential item functioning, which benefits those who took the test in the original language.

Hambleton (2002) warns about the complexity of adapting tests. He affirms that low-quality translators involved in test adaptation are not uncommon, noting that bilingual proficiency does not guarantee the quality of the test adaptation. Nonetheless, a good translation does guarantee validity of test scores cross-nationally. A good translation produces valid results for each version of a test, but does not necessarily provide a good base for cross-country comparison. For example, if students from Canada and Colombia well-formatted questions, but because of the translation, Colombian students need more time to read it, then we can compare this result within countries, but it would not be appropriate to compare performance between nations. Since a good translation is a key factor of the success of the international studies, IEA creates a standard for the translations

> When translating test items or modifying them for cultural adaptation, the following must remain the same as the international version: the meaning of the

> question; the reading level of the text; the difficulty of the item; and the likelihood of another possible correct answer. (IEA 1999:45)

International studies like TIMSS and PISA have shown that test adaptation is no small challenge. The scarcity and high cost of qualified translators, insufficient specific guidelines for translators in each country, and the difficulty of handling multiple-choice questions, are issues that researchers must address. Hambleton (2002) reports that the latest studies have implemented controls on translation methodology, but more improvement is still needed.

Translation is an even more complicated and important issue when the study uses qualitative techniques. In practice it is more difficult to deal with language barriers through interviews or observation than by the application of a survey.

Another important t issue is to define clearly the populations of the study. Chromy (2002) summarizes the most important aspects of sample design and their application in fifteen international studies conducted since 1960. Recent publications by the Board of International Comparative Studies on Education (BICSE) and the IEA have improved the standard required in sampling design addressing equivalency across nations.

There is no single rule about whether grade or age is more appropriate for comparative analysis, but which population to study is an important issue. Age and grade are alternatives to define samples. According to Chromy (2002), an alternative means of selecting the population is base on the starting date of the school year in different countries. The rationale here is to avoid comparisons between countries that are finishing the school year and those that are just starting it.

A third way to define the population is to exclude some subjects based on a specific criterion. These reasons can be disabilities, language, geographical locations, or other characteristics defined on the instruments. Educational policies applied in different countries may affect the comparability of the results. This could be the case with inclusion policy, where students with disabilities attend regular school in one country, while other countries have a separate system for them.

Technical issues are also important. Comparative analysis could be seriously flawed if missing data is not analyzed. Schafer (1997) affirms that sooner or later researchers face the problem of missing data. Some subjects may not respond to some questions, and this is a potential source of bias. There are strategies for minimizing bias, such as case-deletion, substitution of the item mean, regression predictors, and multiple imputation. The strategies must be selected taking into account that imputation may produce underestimation across group variables.

Nevertheless, when a remarkable amount of data is missing, it may be necessary to exclude the country from the study. For instance, Amadeo et al. (1999) exclude Switzerland from the analysis of the second population in Civiced- 99 because of missing data.

Another technical issue is the appropriate use of weights. Since the sampling method used by large international studies considers two stages, the probability of being selected is not equal for each student. In this case, in order to ensure that the data are representative of the country, it is necessary to weight the data. If this information is not available, the sample is no longer representative of the country and it makes the data unsuitable for comparison. International studies can lose power when technical problems

are not addressed accordingly. Amadeo et al. (1999) exclude Colombia and Hong Kong from their analysis because no weights were available.

According to LeTendre et al. (2001), one of the paradoxes of testing policy is that governments provide economic resources to develop international comparative studies, but then fail to support research. The case of the Civics-99 study is a prime example of this problem: while 28 countries participated, only 4 have produced national reports. One of the barriers has been that the technical report of this study is not available yet. This shows another difficulty for researchers in comparative education, because without a technical report there is no data, and without data there is no analysis.

The amount of data collected is difficult to manage. Table 3.1 shows the diversity of methods used in Phase I of Civics-99. Different strategies were used to research national education systems concerning civic education. The sheer number of studies in each country is valuable. This data should help in the analysis of the survey in Phase II. The main lesson in this case is that comparative cross national data is more equipped to analyze variation within-countries than between-countries.

Finally, coordinating an international study is a complex task. First, government agendas do not necessarily complement research agendas. Some countries may begin the study but fail to complete it, as was the case of England and Iran in the IEA Civic study of 1971 (Torney 1975), or Argentina, which collected the data and then did not submit it for processing (personal communication with international coordinator of Civics-99). Governments also work at different paces and have different policy priorities; consequently, it is difficult to get all countries ready to start the study at the same time. For instance, Switzerland's case study reported that "unfortunately, Switzerland joined

the IEA late..." Four countries did not participate at all in Phase I. For the first population thirty nations participated in this study. Phase I included twenty-four nations; Phase II considered twenty-eight nations. Israel and the Netherlands participated in the first phase but not the second, while Chile, Denmark, Estonia, Latvia, Norway, and Slovenia participated in the second phase but not the first.

The Chilean national representative, when asked why Chile did not participate in the first part, said, "We not only did not participate in the first part, but we also arrived late to the second" (personal communication, June 2, 2003). In fact, Chilean policy makers argue that Chile did poorly in this test because the concepts included in thirteen out of thirty-eight questions were not included in the Chilean civics curriculum.

Table 3.1 Civics-99 Phase I: Research strategies by Country

	Research Methods	
	IEA instrument	**Review of the literature of civic education**
AUSTRALIA	Civics educators National representative survey	
BELGUM	21 resource experts 140 organization (28%response)	
BULGARIA	15 focus group 20 national experts	Text books 1890-1944 Legislature 1944-1990 Compulsory curriculum since 1995
COLUMBIA	7 experts 4 focus group 20 individual interviews	110 sources
CZECH REP.	Questionnaire 20 teachers interview teachers and specialist	Multiple sources
ENGLAND	12 national experts (by telephone) National Teacher survey Interview teachers	Economics History Political education
GERMANY	100 experts from different fields 283 project about Democratic action 4 days seminar (40 best project) 168 experts	
HONG KONG	Structured interview 25 people	Textbooks
HUNGARY	Expert panel	Political socialization Pedagogical literature
ISRAEL	Interview experts, Interview Arab States Edu. System.	Instructional material
LITHUANIA	Focus group 60 teachers, 90 students, 25 parents Interviews 200 experts	Historical cultural studies Textbooks Pedagogical journals

Table 3.1 Civics-99 Phase I: Research strategies by Country (continued)

	Research Methods	
	IEA instrument	**Review of the literature of civic education**
PORTUGAL	6 focus group Interviews 8 teachers, 2 parents 2 experts in teacher training Youth politicians, 2 represents of minorities 1 former minister	Legislation Policy documents
ROMANIA	interview 40 teachers 12 decision makers 1500 students	Text books Journals
RUSSIAN FEDERATION	Interview teachers and students	Textbooks, journals
SWITZERLAND	Oral and written Interview (19 exp) More detail interview (6 experts)	
USA	15000 school districts survey Focus group (two states), Interview 4 specialists	Extensive Textbook analysis

CHAPTER 4

DATA

This chapter provides a description of and explanation for the measures and methods I use to test my empirical hypothesis. First, I describe the IEA civic education study 1999 and World Bank 2000. Second, I describe the dependent variable and each of the independent variables. Each analytic method including estimation procedures used for each hypothesis is described before each results section in the following chapter.

Data

The International Education Association (IEA) conducted the second cross-national civic education study in 1999. It is a survey of 14-year-olds, mostly attending eighth grade, to see what they know about democratic practices and institutions. The study assesses knowledge of democratic principles, skills in interpreting political communication, concepts of democracy and citizenship, expected participation in civic-related activities, and attitudes related to trust in institutions, the nation, opportunities for immigrants, and women's political rights. A two-stage sampling design survey was administered to 93,882 youths in 28 countries. For this study Cyprus data was excluded because it was collected through a sampling design different from that used in other countries.

Information on school resources was collected from 4,137 school principals and 9,607 teachers (IEA Civic Education Study, 2003). On average, 3,341 students, 148 principals and 355 teachers per country were surveyed. Students also completed surveys that included questions about their families, teachers, schools, and after-school activities.

The Civics-99 data offer a unique opportunity to investigate the school effect on civic knowledge cross-nationally. First, the sample is nationally representative of students and will permit broad generalization. Second, the 27 countries in this study are geographically widespread, have varied forms of government, and follow different cultural traditions. Third, Civics-99 is a two-phase study including qualitative (in the form of case studies) and quantitative phases. The combined results create an international database useful for quantitative analysis. Fourth, the data include all the information necessary to analyze complex sample data structure, so it is possible to take into account the design effect, and weigh the cases appropriately. In addition to Civics-99, I use World Development Indicators developed by the World Bank (World Bank 2003).

What is comparable in civic education in different countries? Researchers have identified that cross-national comparisons should take into account providing thoughtful inventory of methodological recommendations (Almond and Verba 1963; Chromy 2002; Edwards, Holmes & Van Graff 1973). As I discussed in Chapter 3, methodological issues are related to cultural context, population definition, technical issues, and political issues.

In terms of translations, the Civics-99 tested a pilot instrument with 24 nations participating in the first phase. This instrument was translated for each country and sent to the International Research Coordinator (IRC). Here native speakers with full command of English reviewed and made suggestions for the instrument, and then the IRC sent them back to countries. This procedure was applied to 25 out of 28 countries, as Torney-Purta (1999) reports, because three countries did not submit the instruments on time. The Civics-99 survey asked 38 questions to students in 28 countries; hence, there were 1,064

country-item interactions. Torney-Purta et al. (1999) test the differential item functioning in two dimensions. First, the authors study whether or not the questions presented were of equivalent difficulty for each country. As a result, eight items were stricken because of a country-interaction effect. Since this is a small number of cases (less than 1%), the authors of Civics-99 re-estimated the item parameter difficulty. Second, some items could not discriminate between high- and low-achieving students. Torney-Purta and her colleagues find that in 33 cases there was poor discrimination. Consequently the authors, in order to assure comparability, decided to delete those items for those countries.

Translation is not only a barrier between nations but also within them. Many countries have more than one official language and many more unofficial languages. International questionnaires frequently include a question about what language students use at home. For instance, since Switzerland is multilingual, research designers considered interviewing German, French and Italian experts. Reichenbach (1999) recognizes that because of "time translation constraints" they did not include an expert for the Italian-speaking part of Switzerland (Reichenbach, 1999: 567). Another example of the important role of the language in cross-national studies is the case study of Israel in Civics-99. Researchers wanted to know what youth in Arabic countries think about civics. Consequently, the research design included in the study the opinions of high officials of Arab countries; for this reason the researchers asked Arab graduate students to conduct the interviews.

Population definition. In seventeen countries, 8th-grade students took the Civics-99 test, while in nine countries 9th-graders participated in the study. The international mean for the group of countries tested at 8th grade was 97.23 while the 9th-grade group

scored 104.23. Table 4.1 shows that in some countries there is high dispersion of student age among grades. This is the case in Colombia and Portugal, where students attending 8th grade are on average 14.5 years old, but the standard deviations are 1.2 and 1 year respectively.

It is also important to take into account the date that students took the exam. For example, from Table 4.1, we can see that Italian 9th grade students took the test during the second half of the year. On the other hand, Chilean students took the test when they just were starting 8th grade. To compare them would skew the result by treating unequal amounts of schooling as equivalent. Second, at the national level, it is important to take into account when the test was applied. While some countries applied the test simultaneously, others, such as Colombia, took more time in its applications (standard deviation 2 months)

In terms of population. Methodological concern about this population issue does not assure that in practice this kind of subject's characteristics is included in data collection. Civics-99 includes a variable called *itexclud* which seeks to capture students who are functionally disabled, educably mentally retarded, unable to speak or read, or who fit other descriptions of disabilities defined at a national level. Civics-99 does not present cases of these categories; it suggests that excluding subjects was not considered by the researchers as a way to define the population.

Measures

The analyses combine data collected from students, teachers and schools with aggregated country-level from the IEA Civic Study. Below is a description of each, plus

in Table 4.1 basic descriptive statistics for each variable at the student and school levels can be found, while in Table 4.2 descriptive statistics for each variable at the country level can be found.

The dependent variable: Civic Knowledge

Civic Knowledge Score was constructed by the study the using item response theory scale and based on 38 multiple-choice test items divided in two sub-scales were also constructed that I use here. Civic knowledge is made up of 25 items, which the skills in interpretation of material with civics or political content subscale is measured by 13 items. Both scales require students to demonstrate knowledge on three domains: i) Democracy; ii) National identity, regional and international relationships, and iii) Social cohesion and diversity. Both scales are positively correlated (r = .92) and the Cronbach's alpha reliability coefficients are higher than .85 for every country.

The Independent Variables

Independent variables at the student level

The student-level of the model will include: i) demographic characteristics gender, language spoken at home; ii) education expectative student's expectations; iii) socialization inside school: peers, open classroom, opportunity to learn; iv) outside school socialization: socialization with friends, participation in media exposure, and political discussion with friends.

Demographics

Gender is binary coded (0 = girls, 1 = boys).

Language indicates how much the language that the student took the civics test in is spoken at home: 0 if never, 1 if sometimes, 2 if always or almost always.

Socioeconomic Status (SES) is a standardized composite score by family based on two indicators: mother's education level and number of books in the home.

Family Structure indicates whether the student is living with neither, one, or both parents; coded 0, 1, 2 respectively.

Student Expectations

Education Expectation: The student's estimate of how many years of education students they expect to finish. It is coded 0 (1 or 2 years), 1 (3 or 4), 2 (5 or 6), 3 (7 or 8), 4 (9 or 10), and 5 (more than 10 years).

Socialization in the school

Peers is a composite score of how often the student has discussions about what is happening politically in the nation and abroad. Answer to the question. "How often do you have discussion of what is happening in your country and internationally" is coded 0 if "never", 1 if "rarely", 2 if "sometimes", and 3 if "often."

Opportunity to learn is measured by student reports of what he or she had the opportunity to learn in the school for a set of twenty curricular items on civics (e.g., understanding people with different ideas, contributing to solving problems in the community). The

mean of question school curriculum section is coded 0 if strongly disagree, 1 if disagree, 2 if agree, and 3 if strongly agree.

Open Classroom is a composite scale of student observations on the dynamic inside the classroom. Students were asked if they "fell free to disagree with their teachers", "students are encouraged to make-up their own minds about issues", "students feel free to express opinions in class even when their opinions are different from those of most other students", "teachers encourage students to discuss political or social issues", "teachers present several sides of an issue", "students bring up current political events for discussion in class." These questions are coded 0 for "strongly disagree," 1 for "disagree," 2 for "agree," and 3 for "strongly agree."

Socialization outside the school

Participation is measured as the number of organizations that the student participates in (max = 15 and min = 0).

Media is a composite score based on how frequently the student reads articles or listens to news. It is coded 1 if never, 2 if rarely, 3 if sometimes, and 4 if often.

Independent variables at the school level

Qualities of schools are in three categories. The first addresses the social composition of the school, the second focuses on teachers and teaching, and the third focuses on the school as an organization. Table 4.1 shows the descriptive statistics for school level variables.

Social and academic composition of the school

Sector is coded 0 for public school and 1 for private school.

Socioeconomic Status (SES) is the average of student SES per school*, with SES measured as above.*

Teaching quality

Teachers' experience is the number of years a teacher has spent teaching.

Teachers' experience in civics is the number of years a teacher has spent teaching civics

Teachers' education is the highest level of education completed by a teacher.

Teachers' degree in civics is coded 0 for no degree in civics and 1 if the teacher has received a degree in a civics related subject.

Teachers' training is coded 0 for no training in civics and 1 if the teacher has received training or professional development activities related to civics education.

Opportunity to learn: The teachers answered questions about whether 20 topics related to civics or not were taught in the tested class (e.g., citizen rights, election and electoral system, the judicial system). The average of the 20 answers is coded 0 if the teaches the topic "not at all", 1 if "a little", 2 if a "considerable" amount, and 3 if the topic has been covered "very much".

School as organization

School participation in civics projects is coded 0 if the school does not participate and 1 if the school participates in civics projects.

Student Council is coded 0 if the school does not have a student council and 1 if the school has it.

Class Size is the average class size of the target grade.

Instructional time is the amount of hours devoted to instructional time in civic related topics.

Independent variables at national level

Gross National Product per capita (GNP) is a measure of economic development,

Income Inequality is measured by the Gini index. This index is scaled from a minimum of zero to a maximum of one hundred; zero representing no inequality and one hundred representing the maximum possible degree of inequality.

Table 4.1. International Descriptive statistics for all student and school variables

	N	Min	Max	Mean	S.D
Dependent variable					
CivicEd	93558	9.47	165.19	99.72	20.08
Students					
Gender(female)	93,108	0	1	0.51	0.50
Language at home	84,521	0	2	1.91	0.34
Mother Education	87,174	0	7	3.66	2.14
Books at home	92,913	1	6	4.19	1.37
Family structure	79,795	0	2	1.76	0.54
Political discussion	88,244	0	3	1.54	0.89
Expectations					
Years further education	92,463	0	6	3.21	1.44
Socialization Outside the school					
Future political action	70,533	1	4	2.70	0.58
Talk with friend	92,029	0	7	0.76	0.92
Time outside	70,889	1	3	1.83	0.80
Socialization inside the school					
School parliament	93,882	0	1	0.25	0.43
TV news broadcasts	90,173	0	3	2.37	0.78
Political discussion at school	67,985	0	3	1.50	0.71
Political discussion with peers	69,380	0	3	1.42	0.68
Open classroom	68,041	1	4	2.86	0.59
School					
Sector	3,537	0	3	0.23	0.64
SES	4,074	1	7	3.74	1.10
Academic control	4,073	68	148	99.87	12.33
Grade	3918	7	9	8.31	0.46
School as organization					
School civic Programs	3,697	0	1	0.26	0.44
Student Council	3,714	1	2	1.89	0.31
Class size	3,519	1	80	24.81	6.89
instructional time	3,261	20	84	36.56	3.92
Teachers quality					
Teacher experience	3,692	1	51	16.84	10.49
Civic experience	3,515	0	46	13.05	9.97
Teacher Education	3,577	1	5	3.07	1.09
Teacher degree in civic	3,690	1	2	1.60	0.43
Teacher civic training	3,695	1	2	1.41	0.42
Teachers' age	3,712	1	6	3.70	0.90
OTL	3328	1	4	2.4	0.43

Table 4.2. International Descriptive statistics by country.

	GDP per capita in US $	Most recent gini score from 1992-1997
Australia	20,640	31.70
Belgium	25,380	23.00
Bulgaria	1,220	.
Chile	4,990	.
Columbia	2,470	.
Czech R.	5,150	20.80
Denmark	33,040	24.00
England	21,410	34.60
Estonia	3,360	.
Finland	24,280	22.60
Germany	26,570	30.00
Greece	11,740	.
Hong Kong	23,660	.
Hungary	4,510	35.20
Italy	20,090	34.60
Latvia	2,420	.
Lithuania	2,540	.
Norway	34,310	24.20
Poland	3,910	32.40
Portugal	10,670	.
Romania	1,360	.
Russian F.	2,260	4.70
Slovak R	3,700	18.90
Slovenia	9,780	22.20
Sweden	25,580	.
Switzerland	39,980	.
USA	29,240	37.50

Table 4.3. Students' Age and Grade Distribution IEA Civics Study 1999

	Age		Month of testing		Grade		
	Mean	sd	Month	sd	6	8	9
AUSTRALIA	14.65	0.48	8	0.0	-	-	100
BELGUM	14.06	0.67	3	0.5	-	100	-
BULGARIA	14.91	0.56	6	0.1	-	99.51	0.49
CHILE	14.28	0.78	10	0.0	-	100	-
COLOMBIA	14.57	1.20	9	2.0	-	100	-
CZECH REP.	14.40	0.45	5	0.1	-	100	-
DENMARK	nd	nd	6	0.0	-	100	-
ENGLAND	14.71	0.30	11	0.0	-	-	100
ESTONIA	14.74	0.60	4	0.0	-	100	-
FINLAND	14.83	0.34	4	0.0	-	100	-
GERMANY	14.84	0.38	4	0.0	-	100	-
GREECE	14.69	0.54	4	0.8	-	-	100
HONG KONG	15.32	0.84	7	0.5	-	-	100
HUNGARY	14.43	0.54	3	0.0	-	100	-
ITALY	14.98	0.66	4	0.3	-	-	100
LATVIA	14.47	0.63	5	0.5	-	100	-
LITHUANIA	14.75	0.55	5	0.0	-	100	-
NORWAY	14.84	0.31	4	0.5	-	-	100
POLAND	14.99	0.41	6	0.5	-	100	-
PORTUGAL	14.49	0.99	4	0.0	-	100	-
ROMANIA	14.81	0.53	5	0.0	0.27	99.70	0.03
RUSSIAN FED.	15.05	0.46	4	0.3			100
SLOVAK REP.	14.26	0.37	5	0.3	0.20	99.71	0.09
SLOVENIA	14.76	0.38	4	0.0	-	100	-
SWEDEN	14.33	0.41	10	0.2	-	100	-
SWITZERLAND	14.95	0.68	5	0.8	-	-	-
USA	14.70	0.55	10	0.0	-	-	100

CHAPTER 5

RESULTS

This chapter presents each research question, followed by the specific hypothesis, analysis strategy, and results. I test five hypotheses across three broad questions. The empirical analyses start with basic descriptive comparisons across nations, then culminates in a series of multi-level, multivariate models estimating the effects of student's, school's and national characteristics on students' civic knowledge.

I. Are there substantial cross-national differences in teacher quality and opportunities to learn civics education in schools?

Hypotheses.

Hypothesis 1a: Given global institutional patterns of standard civics curricula, there will be considerable cross-national isomorphism among teacher quality and opportunities to learn allocated to civics in schools.

Hypothesis 1b: Schools will show considerable within-nation isomorphism in teacher quality and opportunities to learn s allocated to civics.

The first two hypotheses, grounded in the theoretical framework of political socialization and neo-institutional theory, suggest that the political socialization of youth is achieved at school, and that national school systems increasingly have similar levels of instructional resources for the teaching of civics and similar opportunities to learn civics.

Considered from a neo-institutional perspective, national educational systems organize the political socialization of youth by instituting global norms for curricular and extracurricular activities. Civics knowledge achievement not only has less variability than other academic subjects, but civics education has also spread worldwide (Torney-Purta, 1999). A recent study documents the change from a worldwide model of national civics education to a worldwide model of global civics education. This process of globalization of civics education took place during the second half of the twentieth century. Even though there is variation among different countries' civics curricula, global content has grown over time (Rauner 1998).

Analysis Strategy

To test hypotheses 1a and 1b I use measures of central tendency and dispersion of school-level teacher quality and OTL. Isomorphism is a judgment call not a formalistic statistical decision; therefore, I examine the size of cross-national and within-nation variation in key components of teaching and learning civics in schools.

Results

Contrary to hypothesis 1a, there is a considerable cross-national variability in teacher quality. Variability of teacher's experience in civics is greater than their overall experience teaching all together. As the first and third columns in Table 5.1 show, across all nations, teachers have on average taught 16.8 (sd. 10.5) years, 13.05 (sd. 9.9) of those years teaching civics, and the coefficient of variation of years teaching civics (0.76) is larger than that for years of teaching altogether (0.62). There is also wide cross-national

variability in teachers' formal education. On a scale of 1 to 5, the international mean is 3 (sd. 1.21). Table 5.1 shows that teachers in Belgium, England, Italy, Greece, Denmark, Switzerland and Romania have on average a low level of formal education, while the majority of Hungarian, Hong Kong, and Bulgarian teachers hold advanced formal degrees. In addition, there is considerable cross-national variation in availability of teachers holding degrees in civic-related disciplines. The vast majority of teachers have training in civics education in Poland (100%), Finland (89%), Greece and England (88%). In contrast, very low rates of teacher training are found in Lithuania (16%), Latvia (14%), Chile (11%), and Hong Kong (11%). Teacher's participation in civic activities is also variable. Column 7 in Table 5.1 shows that 39% of teachers have participated in professional training in civics. But finding teachers participating in civic activities are rare in Greece (1%), Norway (7%), and Chile (9%). It is not true for countries like Poland (99%), Australia (71%), and Finland (67%) where civic activities are wide spread through the school system.

Teachers holding a degree in civics education also tend to participate in professional training in this subject; these two forms of teacher training are positively correlated ($r = 0.31$, $p < 0.05$. Table 5.2). However, one of every three teachers in these nations has neither participated in civics training programs nor holds a civics-related degree. For example, Chart 5.1 illustrates the cross-nation variability of teacher quality in two dimensions by country: degree and training in civics. The x-axis represents the percentage of teachers holding a civics-related degree, the y-axis represents the percentage of teachers who participated in civics training programs. On the upper right side are countries that have high percentages of teachers who hold civics-related degrees

and have received additional training (Poland, Denmark, the United States, Finland, and Australia). In contrast, Chile and Portugal show comparatively low rates of specialized civics education for teachers.

I next examine the second part of hypothesis 1a, by testing cross-national variation in the four measures of opportunity to learn civics: class size, instructional time, availability of civics programs, and the existence of student organizations.

There is significant cross-national variation in class size. Table 5.3 shows that average class size is 20.77 (sd. 8.0) students, with sizes ranging from two to 80 students per class. In Chile, Colombia, and Hong Kong, schools have more than 30 students per class on average, while in ten countries there are fewe than 20 students per class.

Hypothesis 1a is not supported by the data for instructional hours. There is no substantial variation in the hours of formal civic instruction per week; Table 5.3 shows instructional time allocated to teach civics-related subjects by countries. The international average is 5.9 (sd = 2.02) hours per week. Instructional time ranges from 4.3 in Finland to 8.9 hours per week in Chile.

Column 7 in Table 5.3 shows cross-national variation in the availability of formal civics programs. About one fourth of schools participate in civics-related projects. In Portugal and Latvia, no school participates in civics-related programs; 81.3% in the U.S., 71.8% in Poland, and 55% in Bulgaria include special civics programs in their curricula.

There is moderate cross-national variation in opportunity for students to learn civics-related topics. Column 5 in Table 5.3 shows countries' average opportunity to learn, as reported by teachers; the range goes from 1.91 in Belgium, which means that teachers believe that their students have had little opportunity to learn civics-related

topics, to 3.03 in Sweden, meaning that students have had slightly bit more than "considerable" opportunity to learn the set of 20 civics-related topics. Nevertheless, opportunity to learn (OTL), is rated between "some OTL" and "considerable OTL" in the majority of countries. This moderate variation can be explained by the high consensus among teachers and principals about what they taught. For instance, table 5.4 shows, according to principals "agree" or "strongly agree" that schools prepare students to cooperate with others (98.3%), to protect the environment (96.6%), and to be concerned about other countries (89.5%). About 20% of principals think that the schools "do not prepare students to be patriotic" (20.2%) and "do not stress the importance of voting" (14.8%).

Variation in OTL is also shown in Table 5.5 which indicates nineteen selected topics taught by teachers in their classes. A majority of teachers claim to teach "little" or "nothing about conceptions of democracy" (61.15%), political systems (63.62%), or elections (63.16%). On the other hand, teachers believe that there is "considerable" or "very much" opportunity to learn citizen's rights, environmental issues and events history.

How much cross-national variation is there in the frequency of use of student organizations? On average, students have access to ten (sd. 1.65) organizations. Table 5.7 shows that fewer than half of the students have access to an association sponsored by the United Nations or UNESCO (15%), one sponsored by a human rights organization (30%), a youth organization affiliated with a political party (31%) or cultural association based on ethnicity (34%). About half of the students have access to organizations sponsored by a religious group (51%) or the Boy Scouts and Girl Scouts (58%). Among

the most popular organizations are those that involve sports (96%), art and music (89%), and student council (90%). Student councils and sport organizations are notably widespread; at a cross-national level the standard deviations of these organizations are the lowest of all student organizations.

I examined teacher quality and opportunity to learn (OTL) using eight measures. Only instructional time and the existence of student councils are distributed evenly cross-nationally, while all other variables show from moderate and high variation.

Hypothesis 1b states that schools will show considerable within-nation isomorphism in teacher quality and in opportunities to learn allocated to civics.

There is considerable variation in experience of teaching civic within country. Chart 5.2 shows that in almost all of the countries studied, teachers' experience ranges go from one to 40 years, and the majority of countries show distributions with positive skew. With the exception of Lithuania, where the dispersion is moderate (sd= 6.85), countries show dispersions with standard deviations of ten years. I found mixed results on within-nation variability in formal education. Table 5.3a shows that in some countries more than 90% of the teachers have the same level of formal education; for instance in Slovakia (95,91%), Italy (95.66%), Russia (95.28%), Denmark (94.98%), Czech Republic (94.00%), and Greece (93.47). In Sweden, Slovenia, Norway, Hong Kong, England, Germany, Switzerland, and Australia teachers of civics have widely varying levels of formal education in that subject.

Whether or not teachers hold a degree in a civics-related discipline is also variable. Table 5.1 shows at the country level that fewer than 20% of teachers in Chile, Portugal, Hong Kong, Latvia, and Lithuania hold a degree in civics, but more than 80% in

Romania, Australia, Italy, the United States, England, Greece and Finland have received formal education in civics-related disciplines—and 100% of teachers surveyed in Poland hold degrees in civics.

I also found disparities in the amount of training received by teachers: over 70% of teachers in Denmark, Poland, the United States, and Finland have participated in professional development activities or training, while relatively few of their peers (less than 10%) in Greece, Norway and Chile have done so.

Next I examine within-country variation in the four measures of opportunity to learn civics: class size, instructional time, availability of civics programs, and student organizations.

Column 1 in Table 5.3 shows average class size and standard deviation by country. I found a wide range of variation in the numbers of students per class. Variation in class size ranged from 0.11 in Estonia to 0.44 in Russian Federation (0.44).

Instructional time is evenly allocated within countries. The majority of countries have small variation, less than one hour per week. Only in the United Stated (sd = 2.3) , Colombia (sd = 1.28) and Romania (sd = 1) is greater variation found.

There is considerable variation about the opportunity to learn conceptions of democracy. While practically all students in Denmark, Slovakia, Sweden, and Poland had the opportunity to learn conceptions of democracy, about one out of four students in Belgium, Estonia, Hong Kong, Lithuania, and Germany received no formal instruction about how democracy works. This variability is also found in opportunity to learn about political systems. Almost all students in Denmark, Sweden, Norway and Poland have the opportunity to learn about the political systems in their countries, such was not the case in

the teachers report that their students had no opportunity at all to learn about the political systems in Hong Kong (39%), Belgium (34%), Estonia (28%), Lithuania (26%), the U.S. (22%), and Latvia (21%). Emerging democracies such as the Russian Federation, Slovakia and Poland have also shown considerable interest in teaching the mechanism of elections. Teachers report teaching more individual-oriented topics, such as civic virtues, citizenship, and civil rights, more than of institutional, political characteristics of democracies, such as judicial systems, political systems, elections, and social welfare. For instance, all students in Norway and Sweden have had the opportunity to learn about civic virtues, but in other countries a considerable proportion of teachers reported that their students did not learn about civic virtues in their classes: 35.7% in Germany, 27.0% in Switzerland and 21.0% in England. In addition, more than one half of principals agree or strongly agree that students learn about the importance of voting. More than 90% of principals in fourteen countries said that students learn about the importance of voting in schools. Table 5.6 disaggregates the importance of voting by country. Teachers in only two countries reported believing that the importance of voting is not taught in schools: Slovenia (38.46%) and Bulgaria (43.38%).

Nineteen out of 27 countries have student councils in more than 90% of their schools. In only one country do less than half of the schools have student councils (Switzerland, 29%). There is major variability in the percentage of schools that have youth organizations affiliated with political parties. All Scandinavian countries, as well as Germany and Italy, have such organizations in more than 50% of the schools.

I expected to find isomorphism, both cross-nationally and within nations, in teacher quality and OTL. However, the descriptive analysis does not support hypotheses 1a and

1b for all data related to teacher quality and OTL. I found a considerable variability in teachers' experience and education. While in some undeveloped countries only 20% of teachers have been trained in civics-related topics, large percentages of well-trained teachers were found in both wealthy and poor countries. In addition, only one out of five schools offered formal civics programs. Some countries have not incorporated any such program into the curriculum, while in other countries 80% of schools have civics programs or projects. There is little variation in the number of weeks of instruction and students' opportunities to participate in student councils, which are evenly distributed across countries.

II. What is the relative effect of school characteristics compared to effects of student and family characteristics on civic knowledge? Do school effects vary in type and strength across nations?

Hypothesis 2a: Students' individual and family characteristics have a larger effect on political socialization than school resources do.

Hypothesis 2b: *Given the global spread of civics education, with more standard curriculum and instructional resources, school resource do not vary in type and strength across nations.*

The second pair of hypotheses is based on empirical evidence from a large literature on school effects showing that after family background is controlled for, the school effect on students' achievement is only slight. Most of the literature related to school quality started with the publication of the Coleman Report (Coleman et al., 1966), which subsequent literature has tended to confirm (Hanushek, 1989, 1997; Fuller, 1987; Fuller and Clark, 1994). Previous research recognizes that schools may have some effect on political socialization of youth, viewing school as a key agency of politically informing youth. Also school effects research has been limited to academic achievement in mathematics, science, and language skills; never has there been such a study of civics.

Analysis Strategy

I estimated Hypothesis 2 through Hierarchical Linear Modeling (HLM), an appropriate strategy here because I am interested in estimating the effects and magnitude of students', schools', and nations', characteristics on student achievement. This

modeling technique takes into account the problem of design effect introduced by the correlation among students' answers collected from students nested in schools (Goldstein 1987, 1991; Raudenbush and Bryk, 2002).

A three-step procedure is used to test hypothesis 2. First, fully unconditional, two-level models allow me to estimate the intraclass correlation and will suggest if setting a multilevel model is warranted or not. The unconditional model and the intraclass correlation formula is shown in (1) and (2). Thus, I estimate the amount of variance explained on civic knowledge by student-level (σ^2) and school-level (τ_{00}). The intraclass correlation (ρ_ks) is expected to show small cross-national effects, indicating that the total variance between schools is smaller than the variance explained by student level.

The fully unconditional model is:

$$\text{CivicK}_{ij} = \pi_{00} + u_{0j} + e_{ij} . \qquad (1)$$

The explained variance is estimated as

$$\rho_k = \tau_{00}/(\tau_{00}+\sigma^2) . \qquad (2)$$

In the second step I develop a student-level random intercept model,

$$\text{CivicK}_{ij} = \pi_{0j} + \Sigma\pi_{ij} \text{ (Student variables)} + e_{ij} \qquad i=1 \text{ to } 14, \qquad (3)$$

$$\pi_{0j} = \beta_{00} + u_{0j} .$$

In order to compare the strength of students' and schools' variables, in the third step I include explanatory variables at the school level, creating a slope of mean civic achievement, where π_{0j} is the intercept of (3) and becomes an outcome for school variables. All variables are centered around the grand mean. Thus the intercept can be interpreted as an adjusted mean. The error terms u_{0j} are N(0, τ_{00}) and e_{ij} N(0, σ^2). The model presented in (4) and (5) estimates the strength, if any, of the school effect at the cross-national level.

$$\begin{aligned} \text{CivicK}_{ij} = \pi_{0j} \quad & + \Sigma\pi_{1j}\,(\text{Student background}) \\ & + \pi_{2j}\,(\text{Expectations}) \\ & + \Sigma\pi_{3j}\,(\text{Socialization outside the school}) \\ & + \Sigma\pi_{4j}\,(\text{Socialization inside the school}) + e_{ij} \end{aligned} \tag{4}$$

$$\begin{aligned} \pi_{0jk} = \quad \gamma_{00} \quad & + \Sigma\gamma_{01}\,(\text{Social composition}) \\ & + \Sigma\gamma_{02}\,(\text{Teaching quality}) \\ & + \Sigma\gamma_{03}\,(\text{School as organization}) + u_{0j} \end{aligned} \tag{5}$$

This strategy allows me to split the variance explained by each level, to estimate the parameters for each variable at both levels, and to know what proportion of the total variance can be explained, or a pseudo R-square.

Hypothesis 2b can be tested following a procedure analogous described for hypothesis 2a. In order to see if this effect varies across nations, I need to demonstrate

the expected outcome, that teachers' quality parameters ($\gamma_{02\text{-}13}$) and school parameters ($\gamma_{03\text{-}13}$) do not vary significantly among countries.

Results

As expected, the largest variation in civic knowledge is at the student level. Table 5.8 shows the final estimation of variance components for the unconditional model (1). I estimated the within-school intra-class correlation (2) by dividing the school-level variance component by the sum of school and student variance.

$$\rho_{\text{unconditional}} = \tau_{00}/(\tau_{00}+\sigma^2) = 137.93/(137.93+266.45)= 0.34 \quad (6)$$

The results reveal that about 34% of the cross-national variance in civic knowledge is associated with schools. Given that (χ^2= 34,814.19; df = 4,065; p-value < 0.05) I rejected the null hypothesis that the scores for students are independent of the characteristics of the schools they attend.

In addition, the unconditional random-intercept model shows that the total variance between schools is reduced by 14% when student-level characteristics are controlled for. From the result shown in Table 5.9, the intraclass correlation between student-level and school-level is estimated to be

$$\rho_{\text{student-level-random-intercept}} = \tau_{00}/(\tau_{00}+\sigma^2) = 100.33/(100.33+238.43)= 0.29. \quad (7)$$

Thus, 29% of total variance in civic knowledge is associated with differences between schools. Since I found statistical evidence of variation in civic knowledge attributable to schools, I modeled civic knowledge by adding explanatory variables in two levels. The model given in (4) and (5) is significant ($\chi^2 = 34814.19$; df = 4053; p-value < 0.05) and shows variation in civic knowledge across schools. After adding explanatory variables at the school-level, this model accounts for 64% of the initial between-school variance in civic knowledge. In other words, at the cross-national level, the amount of variance explained between schools is 24%, and the pseudo R-square is 64%.

So far, I have found statistical evidence that the variability among schools is responsible for about one quarter of the variation on civic knowledge. Table 5.10 shows the final estimation for the slope-as-outcome model (π_{0jk}). At the student level, all explanatory variables are statistically significant predictors of civic knowledge. Students' background variables show modest importance. I found that students' expectation for future education is the most important predictor of civic knowledge. For instance, students in 8th grade who expect to finish high school score 11.92 points higher that those who expect not complete high school. Among socialization inside the school's variables, being in an open classroom where students are encouraged to have their own opinions is about as significant as students' socioeconomic status; students who belong to more organizations or attend more activities tend to lower their score at the rate of 0.10 points per organization in which they participate; discussion with peers at school has a positive effect. Socializing a lot with friends outside the school lowers the civic score at about the same rate as open classroom, while watching or reading news media is informative for

youth; those who are exposed often score four more points than those rarely exposed to the media.

Cross-nationally, all explanatory variables at the school level, except student council and class size, have statistically significant effects on civics knowledge. But only four parameters—sector, school SES, teacher training, and OTL—are larger than one point on the civic knowledge scale. High-SES students attending private schools score on average 5.61 points higher than low-SES students attending public schools. When teachers hold special civics-related degrees, and teach a wide variety of civics-related topics, they produce better-informed students, whose civic knowledge scores are predicted to be 7.57 points (40% of one standard deviation) higher than those of students whose teachers lack special training and report that they do not cover many civics-related topics in class. At the school-level, after controlling for SES and controlling by sector, teacher quality, as measurable by their teaching degrees, has the largest effect on civic knowledge ($\gamma_{0\,10} = 4.86$).

To examine hypothesis 2b, I estimated the same school effects equation for each country. Table 5.11 summarizes the estimates the amount of variance explained by the student-level and the school-level. The first column in Table 5.11 shows a wide range of variation on civic knowledge explained by school characteristics within nations. The lowest amount of explained variance between schools is found in Norway (6.7%), followed by Finland (8.6%), and Denmark (9.5%), with notably higher values found in the Czech Republic (43.7%), the Russian Federation (46.7%), and Bulgaria (48%). When I introduced student-level variables into the model, the amount of variance explained by the school-level was reduced to different extents in different countries. Thus, while

Switzerland and Australia showed only 8% reduction, in other countries it was larger: Portugal (61.6 %), the Czech Republic (49.5%), and England (42.0 %). In addition, when school variables were included in the model, the countries with the greatest change of the variance explained through the three steps modeling procedure were the Czech Republic (79.5%), Portugal (78.1%), Chile (74.6 %), and Hungary (72.2 %).

Of 27 countries studied, the amount of variance at the school level is less than 10% in eleven nations, between ten and 20% in 5 nations and in the remaining seven countries differences among the schools explain more than 20% of the variance in civic knowledge (because of data inconsistency, four countries were not analysed). This analysis shows variation in scores that is at the school level varies across countries.

Next I focus on what school resources are significant predictors of civics knowledge Table 5.12 shows the parameters estimated for school- and student-level by country. Socioeconomic status is a positive and significant predictor in all countries except Australia. Class size and teacher experience have been found statistically significant in some countries, but marginal in size. Opportunity to learn is a significant predictor in Italy and the Slovak Republic. All other variables present positive or negative effects in different countries. A school's private status predicted a better achievement in civics in England and Portugal; in Hungary, ceteris paribus, students attending private school scored lower than their counterparts in the public system. Participating in civic programs is not a significant predictor in any of the countries studied. Teachers' education is a positive predictor in Switzerland but a negative one in the Slovak Republic. Holding degree in civics is a positive predictor in the Slovak Republic and

Hungary but not in Australia. Teachers' participation in professional development is positively associated with civic knowledge in Italy but not the Czech Republic.

Summary

I expected to find that the total variance between schools is reduced to zero when student-level variables are controlled for. Empirical analysis does not support this hypothesis. In fact, after controlling for student background and school characteristics at the cross-national level, I found that the differences among schools explain one quarter of the variance on civic knowledge. At the cross-national level, variation in civic knowledge is best explained by teacher training and opportunity-to-learn factors. I found that school resources, like teacher training, are significant predictors of civic knowledge. Whether or not the teacher holds a degree in civics predicts an increment of one quarter of one standard deviation on civic knowledge. In the same way, opportunity to learn is also a significant predictor: students whose teachers are well trained learn more civics-related topics and score almost one standard deviation higher in civic knowledge. At the country level there is a clear reduction of the variance explained by schools.

III. Do national social and economic characteristics reduce or enhance school effects in citizenship knowledge?

Hypothesis 3: *A world revolution in funding, enrollment, and mass distribution of schooling now yields a smaller or insignificant association between national socio-economics characteristics and national levels of civics achievement among students.*

Hypothesis 3 is based on previous studies of mathematics and science achievement: Farrell (1989), Heyneman & Loxley (1983) and Fuller & Clarke (1994) have reviewed the school-effectiveness literature in the developing world. In the late 1970s and early 1980s, before the worldwide revolution in education quality was in full swing, particularly in developing nations, these studies reported a strong school effect in developing countries, known as the Heyneman-Loxley effect (HL effect hereafter). In developed nations, family-background variables were found to be more significant predictors of student achievement than school inputs, while in less developed nations a larger school effect was found. The HL effect showed that about 33% of the variations in mathematics and science achievement were explained by national economic development. Recently Baker et al. (2002a) examination of the HL found that it had largely disappeared by the mid-1990s, and that for mathematics and science a Coleman effect of larger student background effects than school effects is evident in most nations regardless of economic differences. But these authors show that national wealth was still associated with cross-national differences in average math and science achievement, although the association seems to be declining. Heyneman & Loxley (1983) estimated the correlation between LnGDP and national achievement to be r=0.55, while Baker and his colleagues found an important decline in this correlation, estimating it to be r=0.16 for mathematics and r=0.15 for science.

Succeeding studies have shown a weak relationship between civic knowledge and economic development. Baker et al. (2002b), through correlation analysis, illustrate how a cross-national variable may be associated with achievement, considering the association between national achievement and HDI (an index of economic, health, and educational

factors, eloquent of a country's socioeconomic level). While the associations between HDI and math, science, and reading achievement explain much of the variance (50%, 43%, 60%), Baker et al. (2002b) find that variation of HDI explained a comparatively small part of variance in civics achievement (16%).

Strategy

The third hypothesis is tested by a three-level hierarchical model, to provide the variance partitioning among students, among schools, and among nations. The unconditional three-level model is defined by three equations:

$$\text{CivicK}_{ijk} = \pi_{00k} + e_{ijk} + u_{0ij} + r_{ij,} \quad (8)$$

$$\pi_{00k} = \beta_{00k} + r_{ij} \quad (9)$$

$$\beta_{00k} = \gamma_{000} + u_{ijk} \quad (10)$$

From this model I expect to find insignificant or very little variability on civics knowledge explained by country-level. Although the three level unconditional model could show that country-level explains little of civics knowledge variation, I estimated the slope-as-outcome variable model considered in equations (8), (9) and (10), expecting to find very small values of γ_{001} and γ_{002}.

$$\beta_{00k} = \gamma_{000} + \gamma_{001}(\text{GND}) + \gamma_{002}(\text{Gini}) + u_{ijk} \quad (11)$$

Result

As expected, civic knowledge is not associated with national economic development nor with income inequality. Table 5.13 shows the final estimation of level-1 and level-2 variance components. The model shown in equations (8), (9) and (10) is significant (χ^2 = 9,104.98; df = 2098; p-value < 0.05). The largest variance is at level 1. Thus 24.6% of the variation on civic knowledge score is at the school level, in contrast to only 4.1% at the country level. Since the amount of variance explained by the third level is small, adding explanatory variables did not help to explain the small variation on civic knowledge at the cross-national level. In fact, adding GNP per capita and Gini as explanatory variables does not substantially change the variance explained by each level. The intraclass correlation is estimated to be

$$\rho=15.65/(102.71+297.08) = 0.038 \qquad (11)$$

As expected, student achievement on civic knowledge is independent of national wealth. Table 5.13 shows the final estimation for the three-level model. The parameters GNP (γ_{001}) and Gini (γ_{002}) are insignificant at the 5% level, implying that no statistical difference on civics knowledge is cross-nationally attributable to either the wealth of nations or income inequality.

Summary

Student achievement in civics is largely independent of a nation's wealth. The amount of variance explained by differences among countries is as little as 3.8%. In addition, GNP

per capita and the Gini index were not found to be significant explanatory variables. Chart 5.3 illustrates the relationship between wealth, the amount of variance explained by schools and the civic knowledge score. The x- axis is standardized GNP per capita; the y-axis is the civic knowledge score; the size of the circle represents the percentage of variance explained by school level. Former Soviet Union orbit countries have similar GNP and their civics score are widely distributed from Czech Republic to Poland.

Table 5. 1. Indicators of Teachers' quality country

	NUMBER OF YEARS OF TEACHING ALTOGETHER		NUMBER OF YEARS OF CIVIC TEACHING		DEGREE IN CIVIC-RELATED DISCIPLINE		PARTICIPATION IN CIVIC ACTIVITIES		HIGHEST LEVEL OF FORMER EDUCATION	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Australia	16.65	9.31	15.18	9.19	0.82	0.38	0.71	0.45	3.4	0.76
Belgium	17.53	9.51	14.93	9.5	0.4	0.49	0.16	0.37	1.11	0.32
Bulgaria	16.58	9.89	14.9	9.49	0.7	0.46	0.3	0.46	4.53	0.87
Switzerland	18.84	10.6	15.94	10.79	0.53	0.5	0.19	0.39	2.15	1.33
Chile	17.51	10.16	11.81	8.93	0.11	0.31	0.09	0.29	2.35	0.83
Czech R.	17.96	11.33	11.2	9.46	0.55	0.5	0.43	0.5	3.96	0.41
Germany	19.39	9.63	16.64	9.51	0.54	0.5	0.24	0.43	2.34	1.34
Denmark	18.89	10.07	17.09	10.17	0.78	0.41	2	0	2.1	0.5
England	16.58	9.78	14.27	9.37	0.88	0.32	0.47	0.5	1.95	0.56
Estonia	20.58	11.93	11.63	9.69	0.3	0.46	0.26	0.44	4.8	0.58
Finland	14.28	9.01	12.9	8.93	0.89	0.32	0.67	0.47	3.8	0.51
Greece	14.17	7.91	12.06	7.94	0.88	0.32	0.01	0.11	2.08	0.32
Hong Kong	11.97	7.13	8.03	6.07	0.11	0.31	0.29	0.45	4.01	1.39
Hungary	19.32	10.65	13.02	9.74	0.79	0.41	0.28	0.45	4.17	0.45
Italy	15.9	8.7	13.86	8.67	0.82	0.38	0.43	0.5	2.04	0.22
Lithuania	16.77	10.98	5.34	6.96	0.16	0.37	0.47	0.5	2.97	0.35
Latvia	18.33	11.67	11.76	10.98	0.14	0.35	0.5	0.5	2.97	0.62
Norway	17.62	10.75	16.25	10.79	0.58	0.49	0.07	0.26	2.54	1.4
Poland	17.74	10.09	13.05	9.47	2	0	0.99	0.09	3.75	0.64
Portugal	9.42	7.15	9.41	7.24	0.18	0.39	0.18	0.38	3.08	0.47
Romania	20.6	13.51	16.52	13.25	0.81	0.39	0.45	0.5	2.2	0.75
Russian F.	18.32	11.5	8.78	8.81	0.79	0.41	0.44	0.5	3.96	0.24
Slovak R.	19.82	11.61	15.83	11.49	0.76	0.43	0.44	0.5	3.92	0.4
Slovenia	17.52	9.09	8.25	6.86	0.3	0.46	0.25	0.43	2.23	0.51
Sweden	14.76	11.12	13.17	10.62	0.74	0.44	0.33	0.47	3.45	1.07
USA	14.96	10.93	11.1	10.36	0.85	0.36	0.75	0.44	.	.
International	*16.84*	*10.49*	*13.05*	*9.97*	*0.58*	*0.49*	*0.39*	*0.49*	*3*	*1.21*

Table 5.2. Correlation between variables at school level.

		x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9	x_{10}	x_{11}	x_{12}	x_{13}	x_{14}
Sector	x_1	1													
SES	x_2	0.00													
		1.00													
Academic control	x_3	0.14 *	0.45 *												
		0.00	0.00												
School civic Programs	x_4	0.04 *	0.04 *	0.10 *											
		0.01	0.03	0.00											
Student Council	x_5	0.06 *	0.10 *	0.08 *	0.10 *										
		0.00	0.00	0.00	0.00										
Class size	x_6	-0.02	0.03	0.06 *	0.11 *	0.04 *									
		0.22	0.12	0.00	0.00	0.01									
instructional time	x_7	0.16 *	0.03 *	0.01	0.07 *	-0.18 *	0.01								
		0.00	0.05	0.55	0.00	0.00	0.71	.							
Teacher experience	x_8	-0.09 *	0.03 *	-0.06 *	-0.05 *	-0.06 *	-0.04 *	0.08 *							
		0.00	0.04	0.00	0.00	0.00	0.02	0.00							
Civic experience	x_9	0.00	-0.02	0.03	-0.01	-0.04 *	-0.05 *	0.09 *	0.70 *						
		0.79	0.16	0.07	0.67	0.02	0.01	0.00	0.00						
Teacher Education	x_{10}	0.06 *	0.17 *	0.07 *	0.02	0.03 *	0.07 *	0.05 *	-0.01	-0.10 *					
		0.00	0.00	0.00	0.27	0.05	0.00	0.01	0.57	0.00					
Teacher degree in civic	x_{11}	0.09 *	0.10 *	0.20 *	0.13 *	0.07 *	-0.15 *	0.06 *	0.03	0.18 *	0.04 *				
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.01				
Teacher civic training	x_{12}	0.11 *	0.08 *	0.09 *	0.15 *	0.11 *	-0.11 *	0.11 *	0.14 *	0.20 *	0.07 *	0.31 *			
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Teachers' age	x_{13}	-0.01	0.00	-0.02	-0.03	-0.03	-0.03	0.06 *	0.84 *	0.63 *	-0.06 *	0.06 *	0.14 *		
		0.52	0.92	0.18	0.08	0.06	0.08	0.00	0.00	0.00	0.00	0.00	0.00		
OTL	x_{14}	-0.09 *	0.03 *	0.11 *	0.07 *	-0.04 *	-0.08 *	0.11 *	0.02	0.07 *	0.03	0.16 *	0.15 *	0.04 *	
		0.00	0.05	0.00	0.00	0.04	0.00	0.00	0.19	0.00	0.14	0.00	0.00	0.01	
Grade	x_{15}	-0.15 *	0.05 *	0.18 *	0.14 *	0.16 *	0.14 *	-0.22 *	-0.10 *	-0.05 *	-0.13 *	0.18 *	-0.08 *	-0.05 *	-0.06 *
		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 5.3 Indicators of Opportunity to learn by Country.

	Class Size		Instructional time (hrs/week)		Opportunity to learn		School participating in Civic Education Programs (%)	
	mean	sd	mean	sd	mean	sd	mean	sd
Australia	24.12	3.39	5.66	1.41	2.26	0.4	40.86	0.49
Belgium	18.88	4.21	4.54	0.7	1.91	0.35	55.01	0.5
Bulgaria	19.57	4.47	7.82	0.89	-	-	10.13	0.3
Chile	31.91	4.30	8.97	0.38	2.43	0.42	20.47	0.4
Colombia	32.78	8.55	6.82	1.28	2.87	0.33	49.39	0.5
Czech Republic	23.09	8.53	5.79	0.41	2.57	0.28	20.71	0.41
Denmark	24.30	3.36	-	-	-	-	9.89	0.3
England	23.02	3.18	-	-	2.4	0.31	24.59	0.43
Estonia	21.75	2.42	4.64	0.64	2.15	0.41	17.17	0.38
Finland	19.84	5.85	4.29	0.63	2.24	0.32	24.29	0.43
Germany	18.99	6.48	5.18	1.09	2.22	0.35	28.79	0.45
Greece	23.71	2.78	7.95	0.34	2.31	0.38	13.97	0.35
Hong Kong	36.18	5.08	5.74	0.94	2.15	0.24	33.66	0.47
Hungary	22.12	2.75	4.79	0.93	2.27	0.39	5.12	0.22
Italy	21.13	4.39	5.53	0.64	2.38	0.44	35.58	0.48
Latvia	18.43	2.51	5.47	0.87	2.23	0.32	0	0
Lithuania	17.80	5.78	-	-	2.11	0.37	3.66	0.19
Norway	20.86	6.40	-	-	2.66	0.25	40.24	0.49
Poland	19.54	6.09	5.03	0.24	2.68	0.32	71.84	0.45
Portugal	22.80	6.58	-	-	2.29	0.29	0	0
Romania	19.65	4.34	6.68	1.02	2.36	0.32	13.64	0.34
Russian Federation	17.15	7.63	6.3	0.75	2.6	0.47	11.71	0.32
Slovak Republic	22.83	7.00	7.48	0.53	2.87	0.31	7.14	0.26
Slovenia	20.51	3.62	7.01	0.18	2.51	0.31	11.4	0.32
Sweden	23.86	3.01	5.08	0.56	3.03	0.37	35.57	0.48
Switzerland	18.33	3.53	-	-	2.37	0.36	10.41	0.31
USA	21.45	8.91	6.18	2.33	2.38	0.54	81.28	0.39
International	*20.77*	*8*	*5.97*	*2.02*	*2.43*	*0.43*	*24.36*	-

Table 5.3b Highest level of formal education per country (%)

	Level				
	1	2	3	4	5
Australia	2.21	8.98	35.33	50.10	2.99
Belgium	89.99	10.01	0.00	0.00	0.00
Bulgaria	0.50	1.74	12.92	9.67	75.18
Switzerland	50.61	22.70	1.35	21.30	4.03
Chile	4.07	74.79	4.22	16.63	0.29
Czech Republic	88.28	2.75	6.78	1.81	0.39
Germany	37.79	26.72	1.76	31.02	2.71
Denmark	0.21	94.98	1.75	1.46	1.60
England	18.35	68.87	12.78	0.00	0.00
Estonia	0.30	0.35	4.27	4.49	90.59
Finland	0.00	3.29	15.45	79.41	1.85
Greece	0.31	93.47	5.16	1.06	0.00
Hong Kong	11.55	1.36	22.38	4.20	60.50
Hungary	0.00	0.44	1.83	75.72	22.01
Italy	0.00	95.66	4.34	0.00	0.00
Lithuania	0.53	4.90	90.12	4.45	0.00
Latvia	4.20	7.55	76.05	10.97	1.24
Norway	30.70	30.09	5.03	24.20	9.98
Poland	1.20	3.68	9.43	85.69	0.00
Portugal	0.86	1.92	89.57	4.13	3.52
Romania	3.67	86.00	4.92	0.28	5.13
Russian Federation	0.00	0.38	3.54	95.28	0.80
Slovak Republic	0.86	2.13	1.11	95.91	0.00
Slovenia	3.96	67.10	28.94	0.00	0.00
Sweden	2.19	16.38	21.58	43.18	16.67

Table 5.4. Crossnational principal's opinion about what students learn at school? (percentages)

Students learn	Strongly Disagree	Disagree	Agree	Strongly Agree
to cooperate	0.19	1.53	58.85	39.43
to understand people	0.30	3.12	71.51	25.07
to protect the environment	0.11	3.58	62.66	33.65
to be concern about other countries	0.32	10.22	70.22	19.25
to solve problem	0.51	11.95	69.72	17.81
about the importance of voting	1.19	13.68	64.36	20.77
be patriotic	1.64	18.54	58.90	20.92

5.5. Opportunity to learn about 19 selected topics

	not at all	little	considerable	very much
trade, labor and unions	29.65	50.59	18.45	1.31
judicial system	20.62	52.60	23.75	3.02
political systems	14.28	49.34	32.94	3.44
elections	14.05	49.12	32.53	4.31
international problems	13.33	49.79	33.08	3.80
international organizations	13.01	52.33	31.40	3.27
social welfare	13.00	49.92	33.35	3.72
conceptions of democracy	12.25	48.90	34.81	4.03
migrations	12.25	53.03	31.29	3.43
economic issue	11.35	52.44	32.79	3.42
cultural differences	9.70	43.08	40.51	6.71
national constitution	9.21	48.58	37.12	5.08
civic virtues	7.71	35.98	44.53	11.78
equal opportunities	7.56	40.14	44.82	7.47
media	5.18	36.13	47.81	10.88
civil rights	3.58	34.18	49.20	13.04
citizen rights	3.19	35.74	50.37	10.70
environmental issues	2.41	24.12	54.12	19.35
events in history	2.28	19.67	55.43	22.62

Table 5.6. Students learn about the importance of voting by country.

	Strongly Disagree	Disagree	Agree	Strongly Agree
Slovenia	9.09	52.45	35.66	2.80
Bulgaria	9.56	47.06	40.44	2.94
Italy	2.42	33.33	53.33	10.91
Portugal	0.69	23.61	69.44	6.25
England	1.72	22.41	68.10	7.76
Chile	1.11	17.22	62.22	19.44
Latvia	-	16.67	69.30	14.04
Lithuania	1.24	15.53	66.46	16.77
Switzerland	-	14.05	67.77	18.18
Australia	-	13.68	70.09	16.24
Belgium	1.59	12.70	61.90	23.81
Czech Republic	-	12.14	73.57	14.29
Hungary	0.69	10.42	64.58	24.31
Estonia	-	9.62	74.04	16.35
Greece	-	9.02	59.40	31.58
Romania	0.71	7.80	59.57	31.91
Norway	-	7.33	69.33	23.33
Slovak Republic	-	7.09	75.89	17.02
Hong Kong	0.73	6.57	79.56	13.14
Germany		6.36	63.64	30.00
Columbia	0.71	3.55	47.52	48.23
Finland	-	3.52	74.65	21.83
Poland	0.58	3.47	62.43	33.53
Russian Federation	0.55	3.28	83.61	12.57
USA	-	2.75	62.39	34.86
Sweden	-	2.65	65.49	31.86
Denmark	-	2.45	58.28	39.26

Table 5.7 Cross –National availability of Students organization with-in schools.

Organization at school level	Mean	sd
A SPORTS ORGANISATION OR TEAM	0.96	0.20
ART, MUSIC OR DRAMA ORGANIZATION	0.89	0.31
COUNCIL/STUDENT GOVERNMENT	0.89	0.31
GROUP WHICH PREPARES SCHOOL NEWSPAPER	0.73	0.45
AN ENVIRONMENTAL ORGANIZATION	0.69	0.46
CHARITY COLLECTING MONEY FOR SOCIAL C.	0.68	0.47
ACTIVITIES TO HELP THE COMMUNITY	0.67	0.47
COMPUTER CLUB	0.65	0.48
BOY OR GIRL SCOUTS	0.58	0.49
STUDENT EXCHANGE OR SCHOOL PARTNERSHIP	0.57	0.50
ORGANISATION SPONSORED BY RELIG. GROUP	0.51	0.50
CULTURAL ASSOCIATION BASED ON ETHNICITY	0.34	0.47
YOUTH ORGANISATION AFFILIATED WITH PARTY	0.31	0.46
HUMAN RIGHTS ORGANISATION	0.30	0.46
A.U.N. OR UNESCO CLUB	0.15	0.36

Table 5.8. One-way ANOVA

	sd	*Variance component*	*df*	X^2	*p-value*
Random Effect					
Intercept	11.7	137.93	4,065	5,3143.37	0.00
Level-1 effect	16.32	266.45			

Table 5.9. Random intercept model

	sd	*Variance component*	*df*	X^2	*p-value*
Random Effect					
Intercept	10.01	100.33	4,065	43,904.54	0.00
Level-1 effect	15.43	238.34			

Table 5.10. HLM Estimates of School Variables of Civics Knowledge (Cross-national)

Fixes Effect	*Coefficient*	*se*	*p-value*
Student level			
Gender γ_{10}	-1.11	0.12	0.000
SES γ_{20}	1.6	0.05	0.000
Expectations γ_{30}	2.98	0.05	0.000
Participation γ_{40}	-0.1	0.02	0.001
Open Classroom γ_{50}	1.63	0.13	0.000
Peers γ_{60}	0.94	0.08	0.000
Discussion with friends γ_{70}	-1.61	0.08	0.000
Media γ_{80}	2.2	0.09	0.000
School level			
Intercept γ_{00}	100.74	0.16	0.00
Sector γ_{01}	2.48	0.21	0.00
SES γ_{02}	3.13	0.14	0.00
School civic Programs γ_{03}	0.66	0.36	0.00
Student Council γ_{04}	0.43	0.46	0.07
Class size γ_{05}	0.04	0.02	0.08
Instructional week γ_{06}	-0.13	0.04	0.00
Teacher experience γ_{07}	-0.14	0.02	0.00
Civic experience γ_{08}	0.16	0.02	0.00
Teacher Education γ_{09}	-0.04	0.14	0.00
Teacher degree in civic $\gamma_{0\,10}$	4.86	0.38	0.00
Teacher civic training $\gamma_{0\,11}$	-0.75	0.37	0.00
OTL $\gamma_{0\,12}$	2.71	0.35	0.00

		sd	*Variance component*	*df*	X^2	*p-value*
Random Effect						
	Intercept	8.80	77.79	4053	34814.19	0.000
	Level-1 effect	15.43	238.3			
Random Effect Unconditional Model						
	School mean		137.93	179	3383.71	0.000
	Level-1 effect		266.45			

Table 5.11. Cross-National Comparison of Variation in Civic Achievement Attributable to Family-Background and School Resources.

Country	Unconditional model	Student level random intercept	Slope of mean Civic Achievement
Australia	22.35%	14.76%	9.15%
Belgium	35.10%	18.65%	11.80%
Bulgaria	48.70%	-	-
Chile	36.30%	28.80%	9.22%
Colombia	27.20%	-	-
Czech Republic	43.70%	22.07%	8.97%
Denmark	9.50%	-	-
England	21.10%	12.15%	8.73%
Estonia	21.60%	17.21%	16.34%
Finland	8.60%	6.53%	6.30%
Germany	40.10%	27.90%	20.76%
Greece	16.10%	9.77%	7.77%
Hong Kong	31.40%	26.39%	21.21%
Hungary	27.60%	15.91%	7.67%
Italy	40.20%	31.48%	21.26%
Latvia	37.50%	28.35%	21.81%
Lithuania	27.70%	20.07%	13.31%
Norway	6.70%	4.22%	3.19%
Poland	27.00%	21.67%	20.19%
Portugal	22.10%	12.59%	4.84%
Romania			
Russian Federation	46.70%	40.01%	35.82%
Slovak Republic	38.40%	29.04%	18.57%
Slovenia	11.90%	8.65%	7.26%
Sweden	17.10%	11.66%	8.98%
Switzerland	33.90%	31.16%	20.76%
USA	26.60%	17.11%	12.63%
International	*34%*	*29%*	*24%*

Table 5.12. Coefficients from HLM Regression of Civic Knowledge on Student Background and School Resources Variables.

	Australia		Belgium		Switzerland		Chile		Czech Republic	
Intercept	99.83	0.88 *	97.04	0.85 *	99.73	0.80 *	94.30	0.41 *	109.93	0.48
Sector	-	-	-	-	-	-	-	-	-	-
SES	-	-	3.57	0.89 *	4.37	1.00 *	4.82	0.40 *	6.34	0.49
School civic Programs	-	-			-	-				
Student Council	-	-	5.86	2.27 *	-	-	1.90	0.93 *	-2.26	1.00
Class size	-	-	-	-	-	-	-	-	0.30	0.13
Instructional week	-	-	-	-	-	-	-	-	-	-
Teacher experience	-	-	-	-	-	-	-	-	-	-
Civic experience	-	-	-	-	-	-	-	-	-	-
Teacher Education	-	-	-	-	-2.56	0.91 *	-	-	-	-
Teacher degree in civic	-5.61	1.70 *	-	-	-	-	-	-	-	-
Teacher civic training	-	-	-	-	-	-	-	-	-4.06	1.91
OTL	-	-	-	-	-	-	-	-	-	-
Gender	-	-	-	-	-3.23	0.73 *	-1.70	0.45 *	-3.66	0.60
SES	1.42	0.30 *	1.81	0.46 *	1.38	0.40 *	0.92	0.19 *	1.73	0.31
Expectations	2.39	0.32 *	1.79	0.56 *	2.79	0.39 *	2.43	0.16 *	5.30	0.27
Participation	-	-	-	-	-	-	-0.26	0.10 *	-	-
Friends	-	-	-	-	1.14	0.45 *	-	-	2.31	0.41
Time outside	-	-	-	-	-1.14	0.38 *	-	-	-1.66	0.34
Media	4.63	0.54 *	2.97	1.15 *	-	-	3.15	0.33 *	-	-

Table 5.12. (cont.)

	Germany		England		Estonia		Finland		Greece	
Intercept	98.53	0.82 *	99.94	0.51 *	93.92	0.72 *	109	0.56 *	107.43	0.58 *
Sector	-	-	12.28	3.07 *	-	-	-	-	-	-
SES	8.64	1.90 *	1.89	0.76 *	1.93	0.98 *	1.71	0.72 *	3.76	1.05 *
School civic Programs	-	-	-	-	-	-	-	-	-	-
Student Council	-	-	-	-	-	-	-	-	-	-
Class size	-	-	0.56	0.19 *	-	-	-	-	-	-
Instructional week	-	-	-	-	-	-	-	-	-	-
Teacher experience	-	-	-	-	-	-	-	-	-	-
Civic experience	-	-	0.32	0.17 *	-	-	-	-	-	-
Teacher Education	-	-	-	-	-	-	-	-	-	-
Teacher degree in civic	-	-	-	-	-	-	-	-	-	-
Teacher civic training	-	-	-	-	-	-	-	-	-	-
OTL	-	-	-	-	-	-	-	-	-	-
Gender	-3.61	0.77 *	-	-	-	-	-	-	-	-
SES	1.70	0.30 *	3.45	0.27 *	1.55	0.33 *	1.69	0.34 *	1.29	0.31 *
Expectations	1.85	0.32 *	2.17	0.29 *	3.04	0.35 *	6.86	0.37 *	6.01	0.28 *
Participation	-	-	-	-	-	-	-	-	-	-
Friends	2.26	0.57 *	-	-	2.13	0.53 *	3.19	0.55 *	-	-
Time outside	-1.67	0.36 *	-2.85	0.37 *	-2.99	0.44 *	-1.93	0.44 *	-1.59	0.43 *
Media	1.84	0.61 *	3.76	0.51 *	2.44	0.68 *	2.60	0.73 *	2.20	0.62 *

Table 5.12. (cont.)

	Hong Kong		Hungary		Italy		Lithuania		Latvia	
Intercept	106.14	0.85 *	101.24	0.44 *	105.47	0.67 *	97.04	1.03 *	91.93	0.75 *
Sector	-	-	-6.83	1.43 *	-	-	-	-	-	-
SES	9.96	2.61 *	4.29	0.50 *	9.58	1.23 *	6.25	1.82 *	3.94	0.93 *
School civic Programs	-	-	-	-	-	-	-	-	-	-
Student Council	5.28	1.79 *	-	-	-	-	-	-	-	-
Class size	-	-	-	-	-	-	-	-	-	-
Instructional week	-	-	-	-	-	-	-	-	-	-
Teacher experience	-1.06	0.38 *	-0.13	0.06 *	-	-	-	-	-	-
Civic experience	1.36	0.37 *	-	-	-	-	-	-	-	-
Teacher Education	-	-	-	-	-	-	-	-	-	-
Teacher degree in civic	-	-	2.54	1.18 *	-	-	-	-	-	-
Teacher civic training	-	-	-	-	3.62	1.65 *	-	-	-	-
OTL	-	-	-	-	4.36	1.47 *	-	-	-	-
Gender	-	-	-1.77	0.59 *	-	-	-	-	-	-
SES	-	-	1.30	0.28 *	1.13	0.28 *	1.48	0.47 *	1.24	0.29 *
Expectations	1.41	0.22 *	5.30	0.32 *	2.01	0.27 *	3.09	0.41 *	1.94	0.22 *
Participation	-	-	-	-	-0.92	0.18 *	-	-	-0.51	0.18 *
Friends	-	-	1.71	0.39 *	1.30	0.39 *	-	-	1.29	0.39 *
Time outside	-4.10	0.38 *	-1.26	0.34 *	-0.77	0.30 *	-1.71	0.51 *	-0.99	0.32 *
Media	5.64	0.56 *	1.00	0.46 *	1.20	0.54 *	4.07	0.92 *	1.50	0.51 *

Table 5.12.. (cont.)

	Norway		Poland		Portugal		Romania		Russian Federation	
Intercept	102.92	0.43 *	106.45	0.74 *	95.99	0.39 *	91.86	0.90 *		
Sector			-	-	4.69	1.41 *	30.37	9.66 *	99.12	0.99 *
SES	2.26	0.52 *	3.67	1.18 *	3.91	0.64 *	-	-	7.09	1.42 *
School civic Programs	-	-	-	-	-	-	-	-	-	-
Student Council	-	-	-	-	-	-	-	-	-	-
Class size	-	-	-	-	-	-	-	-	-	-
Instructional week	-	-	-	-	-	-	-	-	-	-
Teacher experience	-0.44	0.14 *	0.28	0.14 *	-	-	-	-	-	-
Civic experience	0.48	0.14 *	-	-	-	-	-	-	-	-
Teacher Education	-	-	-	-	-	-	-	-	-	-
Teacher degree in civic	-	-	-	-	-	-	-	-	-	-
Teacher civic training	-	-	-	-	-	-	-	-	-	-
OTL	-	-	-	-	-	-	-	-	-	-
Gender	-2.69	0.76 *	-	-	-3.83	0.59 *	-1.30	0.56 *	-	-
SES	2.61	0.31 *	1.01	0.31 *	1.63	0.35 *	1.39	0.25 *	1.06	0.36 *
Expectations	4.63	0.32 *	5.72	0.33 *	2.08	0.20 *	2.62	0.22 *	1.94	0.30 *
Participation	-	-	-0.81	0.24 *	-	-	-0.32	0.15 *	-	-
Friends	3.06	0.46 *	1.50	0.59 *	-	-	-	-	2.09	0.53 *
Time outside	-3.05	0.47 *	-1.00	0.33 *	-1.42	0.31 *	-1.84	0.28 *	-1.32	0.51 *
Media	3.84	0.55 *	-	-	-	-	1.64	0.48 *	2.81	0.70 *

Table 5.12. (cont.)

	Slovak Republic		Slovenia		Sweden		USA	
Intercept	107.81	0.58 *	100.42	0.44 *	100.24	0.71 *	104.60	4.64 *
Sector	-1.71	2.14			-	-	-	-
SES	3.94	0.77 *	2.36	0.77 *	3.41	0.88 *	6.56	1.37 *
School civic Programs	-	-	-	-	-	-	-	-
Student Council	-	-	-	-	-	-	-	-
Class size	0.64	0.17 *	-	-	-	-	-	-
Instructional week	-	-	-	-	-	-	-	-
Teacher experience	-0.27	0.15 *	-	-	-	-	-	-
Civic experience	-	-	-0.22	0.08 *	-	-	-	-
Teacher Education	5.17	1.68 *	-	-	-	-	-	-
Teacher degree in civic	-4.88	2.33 *	-	-	-	-	-	-
Teacher civic training	-	-	-	-	-	-	-	-
OTL	3.41	1.65 *	-	-	-	-	-	-
Gender	-1.26	0.59 *	1.50	0.67 *	-2.45	1.09 *	-	-
SES	1.35	0.24 *	1.32	0.28 *	2.84	0.35 *	2.73	0.39 *
Expectations	3.51	0.27 *	5.13	0.24 *	3.94	0.43 *	4.06	0.42 *
Participation	-0.44	0.22 *	-	-	0.66	0.26 *	-	-
Friends	2.35	0.38 *	2.74	0.41 *	1.93	0.71 *	-	-
Time outside	-	-	-1.29	0.36 *	-1.15	0.44 *	-2.56	0.55 *
Media	1.50	0.42 *	-	-	2.01	0.70 *	2.15	0.76 *

Table 5.13. HLM Estimates of School Variables of Civics Knowledge (Cross-national)

Mean Civic Knowledge γ_{000}	1001.93	1.03 *	0.000	
GNP γ_{001}	-0.0001	0.00	0.355	
Gini γ_{002}	0.0705	0.15	0.654	

	sd	*Variance component*	*df*	X^2	*p-value*
			209		
Intercept	10.13	102.71	8	9104.98	0.000
Level-1 effect	17.23	297.08			
	3.95	15.65	13	281.81	0.000

Figure 5.1. Relation, by country, of two dimensions of teacher's civics education

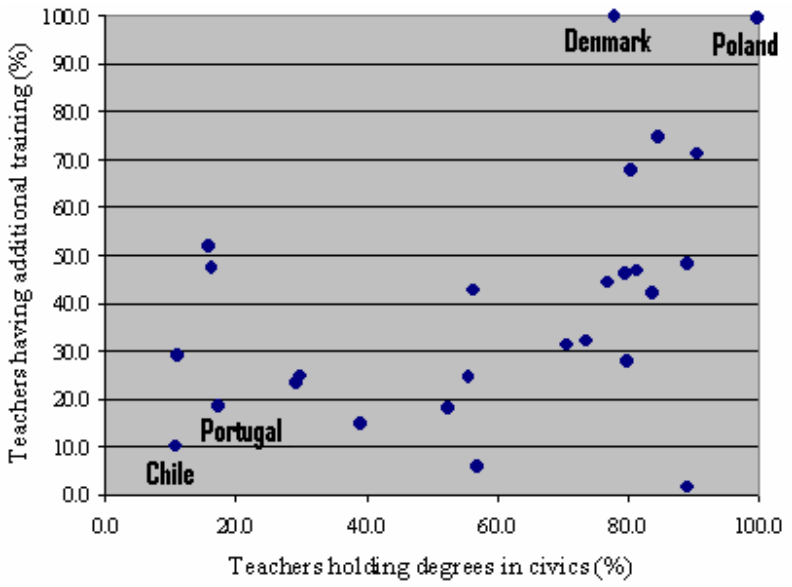


Figure 5.2 . Teacher experience distribution by country.

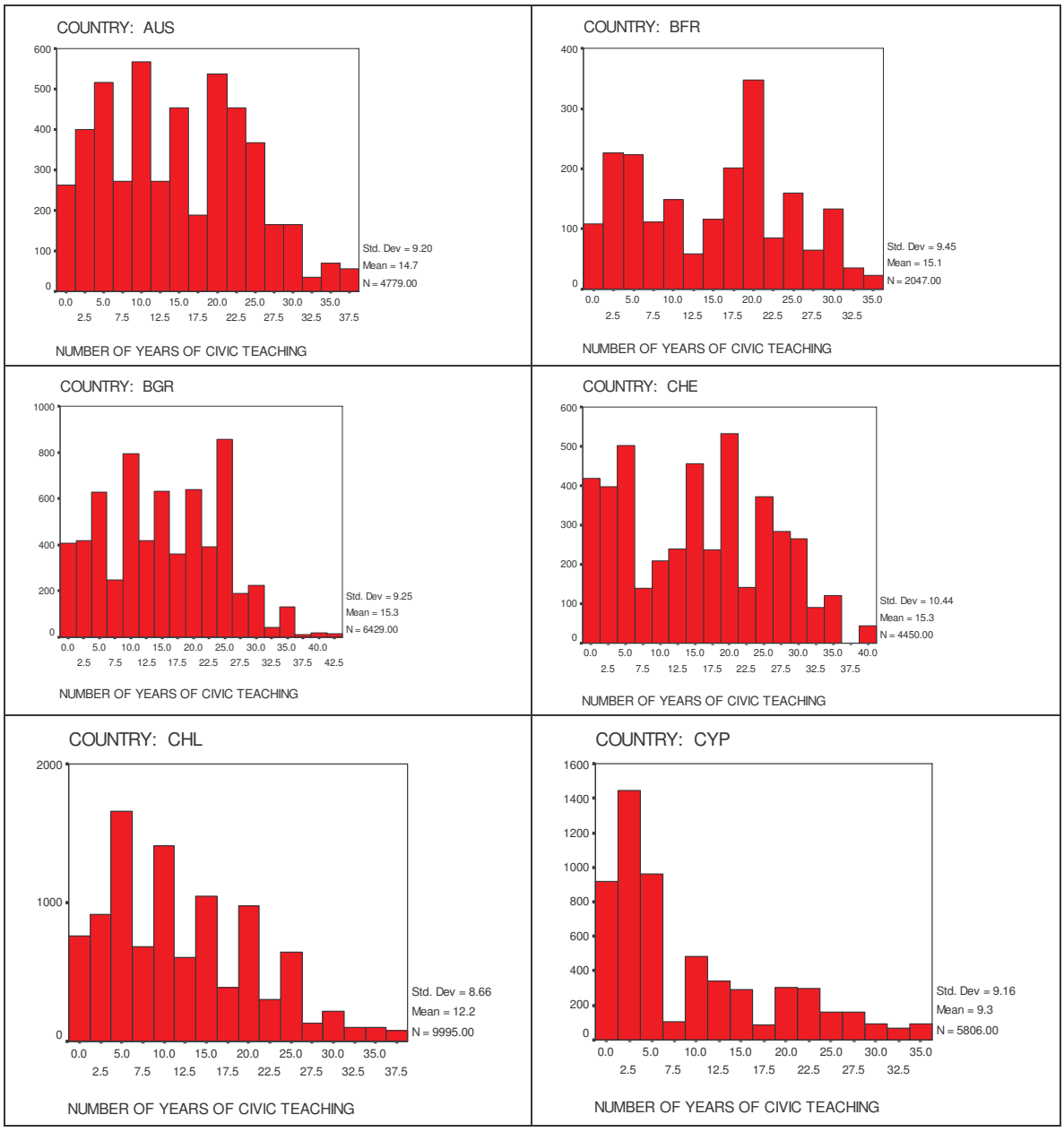


Figure 5.2 . Teacher experience distribution by country.

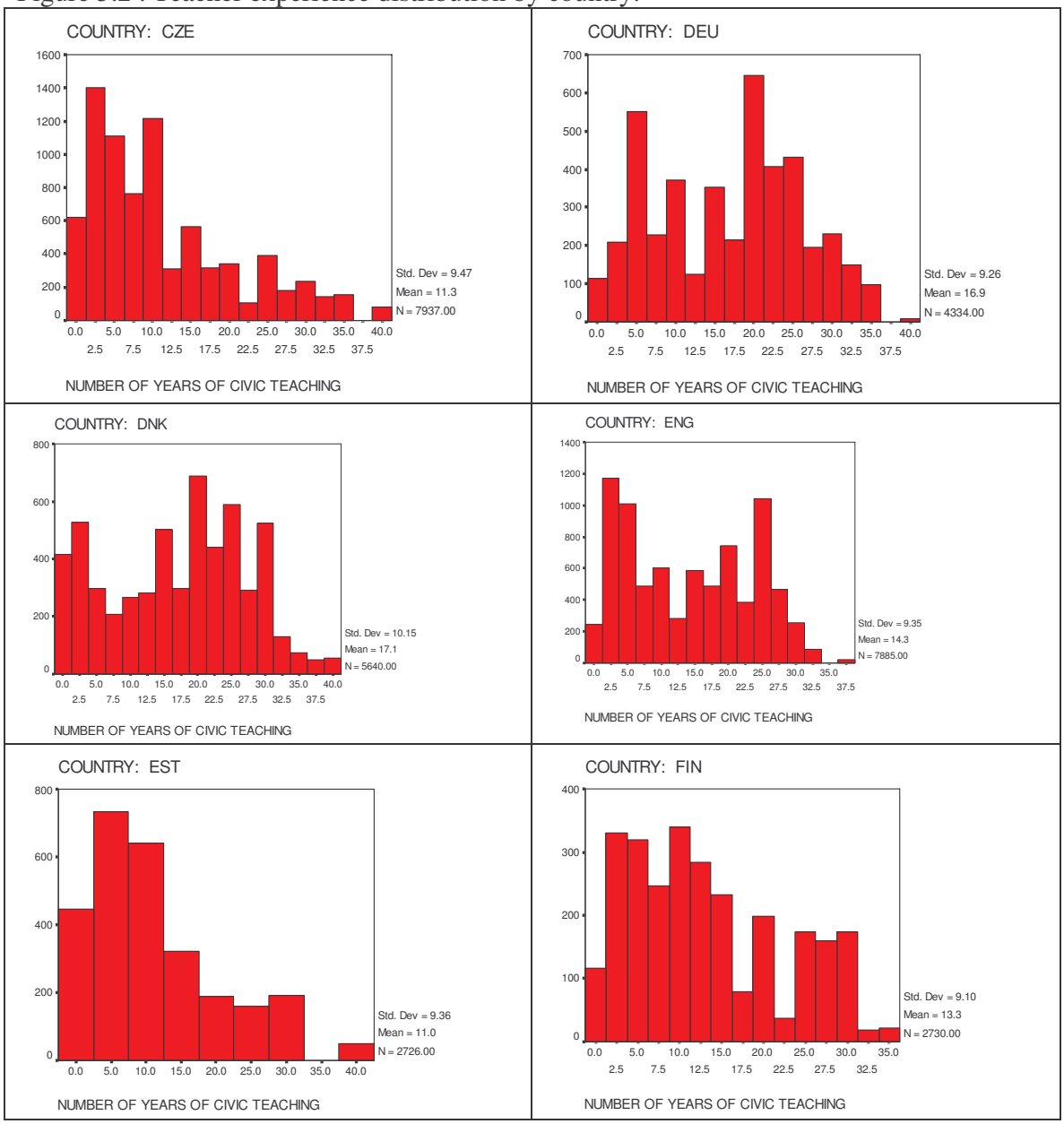
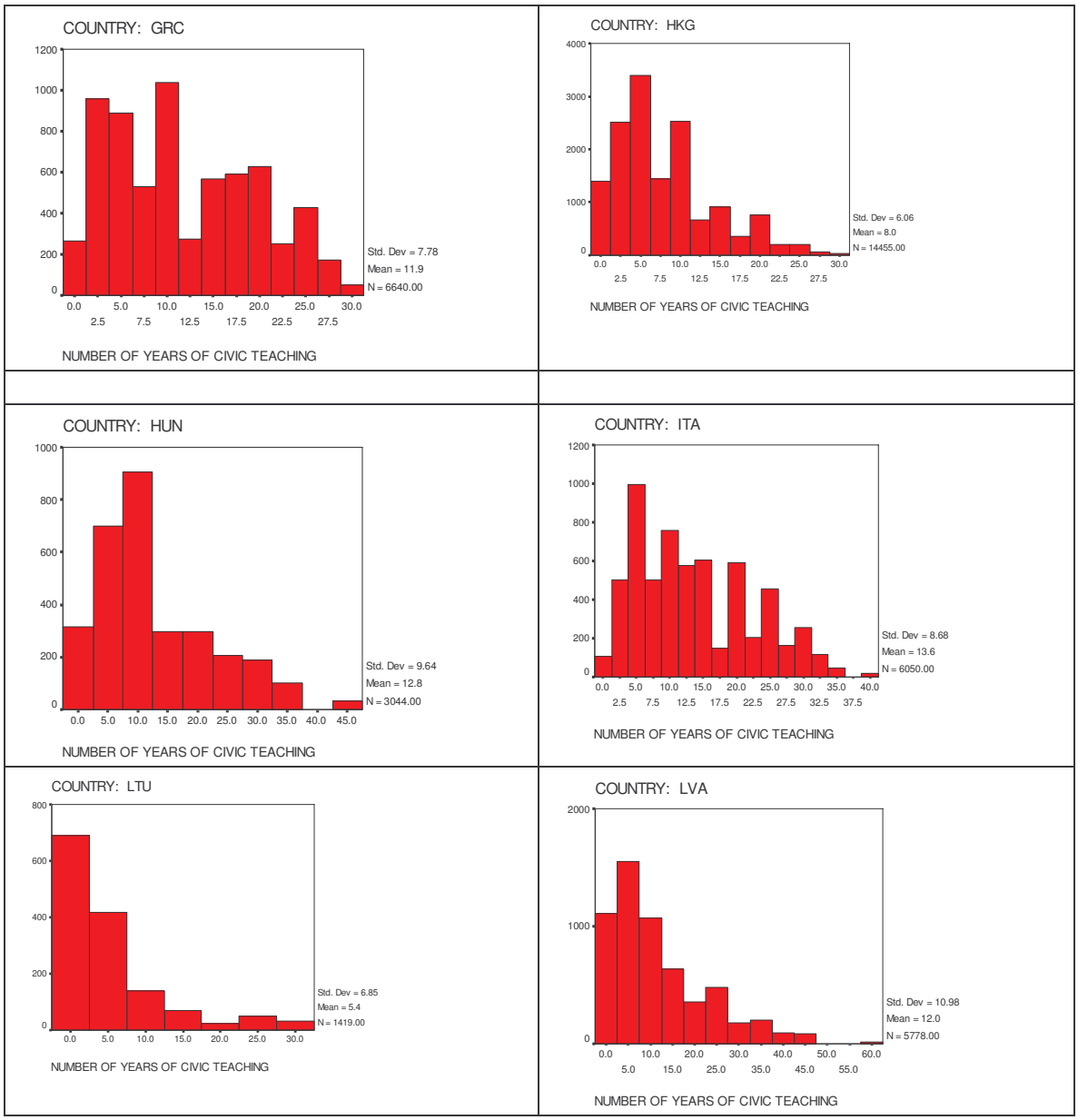


Figure 5.2 . Teacher experience distribution by country.



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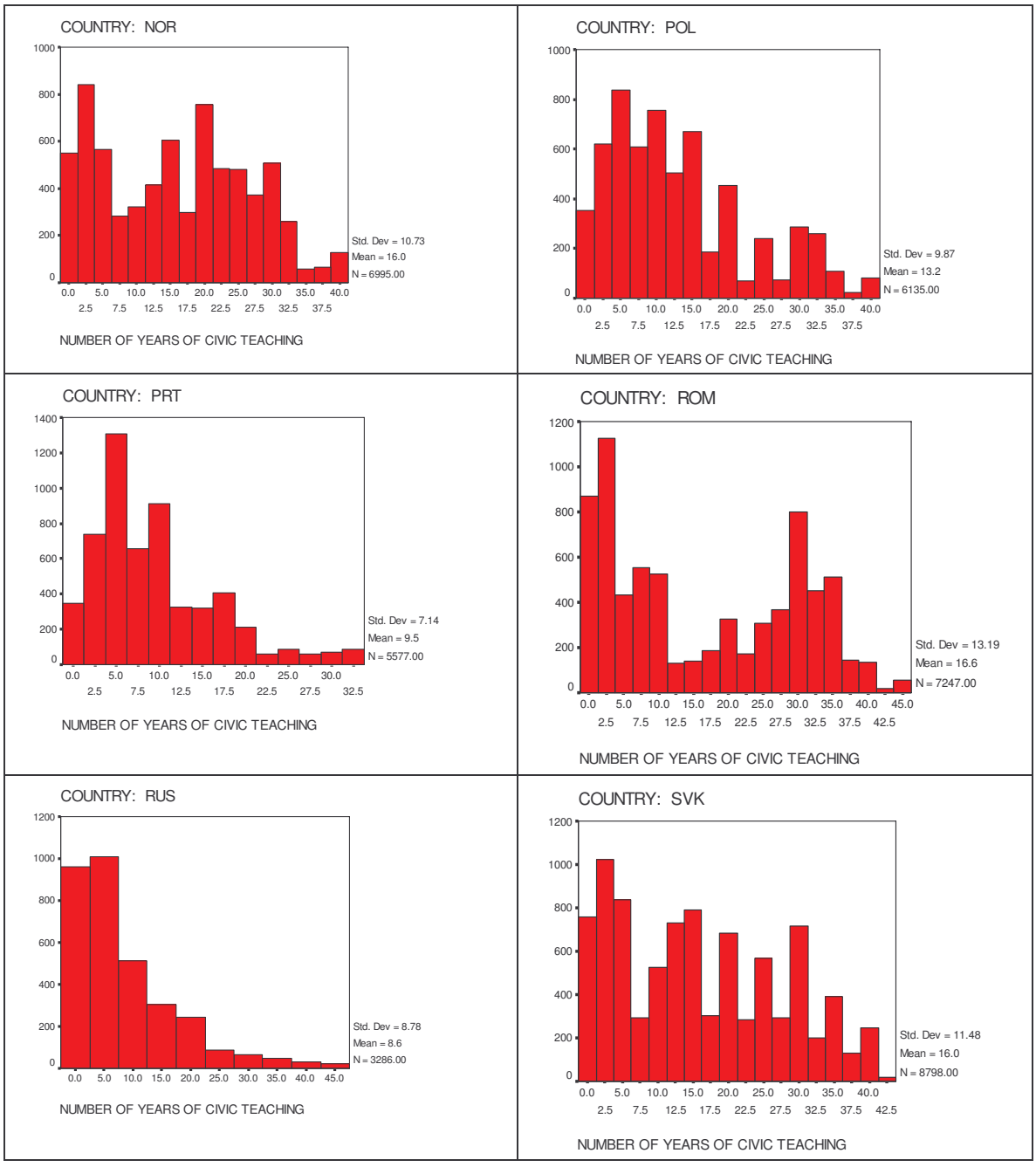
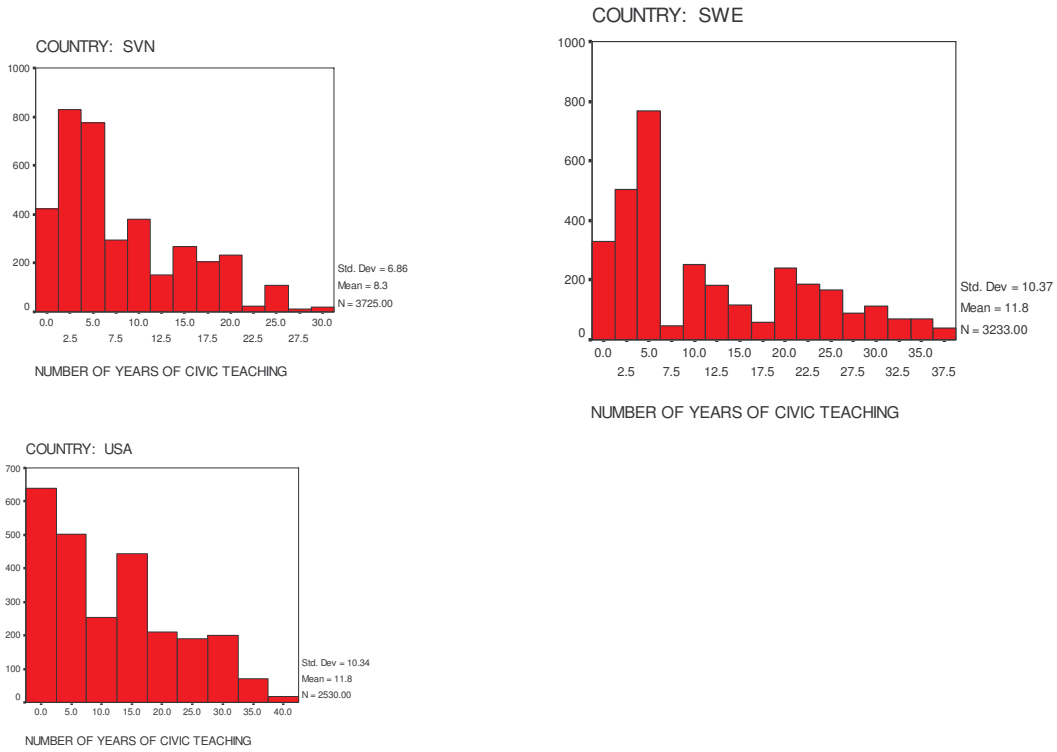


Figure 5.2 . Teacher experience distribution by country.



CHAPTER 6
CONCLUSION

I started this study by asking if schools make good citizens. An extensive body of literature documents a substantial association between educational attainment and civic behavior at the individual level. Individuals, who have spent more time in school tend also to be more involved in the civil society of their nation. Although there are many studies about the way schools produce and distribute human capital, few studies examine political socialization as an outcome of schooling cross-nationally. The primary purpose of this dissertation was to determine whether or not school quality has an effect on political socialization of youth at the cross-national level.

From three research questions I formulated five hypotheses. I tested them using the second IEA Civics study, carried out in 1999, which surveyed about 90,000 fourteen-year-old students and about 4,000 school principals were surveyed in 27 countries. The results of empirical tests of the research questions are summarized as follows:

i) There is considerable variation in teacher quality and opportunity to learn both within nations and cross-nations.

ii) Student and family characteristics have a larger effect on civic knowledge than school effects do. Twenty-four percent of the variation in civic knowledge scores can be explained by the variation among schools at the cross-national level.

iii) There are several important school effects that point to the quality of schools as a factor in helping youth learn more about political processes.

iv) The exact combination of student variables and school variables that explain student achievement in civics varies by country to some degree.

v) Statistical evidence supports the contention that civic knowledge is not associated with national economic development or income inequality.

Across these 27 nations there is considerable similarity in the most basic structure of civics education. All nations have some form of the subject for fourteen-year old students, but at a more detailed level, cross-national variation is seen in teachers and curriculum emphasis. At this deeper level, I did not find what DiMaggio and Powell (1991) call "complete institutional isomorphism." Schools apply different combinations of resources to equip their students with an understanding of how democracy works. For example, as Chapter 5 shows, there is considerable variation in teacher quality and the opportunity to learn varies across nations.

Some resources are equally common across countries, such as instructional time and the existence of student councils. But these data are not sufficient to reveal isomorphism in the way that school prepares youth. On one hand, instructional time is a resource that is highly dependent on other school resources. The standardization of instructional time across nations can be explained by the expansion of compulsory schooling in the majority of countries, which involves a more or less standard school calendar. On the other hand, all countries participating are democracies or emerging eastern European democracies in which, as the qualitative phase of Civics-99 illustrates, governments are fervently interested in promoting democracy as a system of government

at different levels, and one such strategy is introducing such organization in schools. At one level this produces considerable similarity — in that civics is taught to youth, and it is about general democratic ideas — but precisely how it is done varies cross-nationally. Determining the causes of this cross-national variation or lack of variation is beyond the scope of this dissertation; my purpose was to determine whether there are cross-national forces acting on educational systems or not.

Having found variation found at the school level, my second analysis examined the relationship between family and school in producing youth knowledgeable in civics. It has been well established that family characteristics have a larger effect than school does on mathematics and science outcome (Baker et al. 2005). My research confirms this asymmetry: it is also true when I model civic knowledge as the outcome of schooling at the cross-national level. At the same time, I also found that the variability on civic knowledge attributable to school is larger than what has been found in other academic subjects, such as mathematic and science. The amount of variation explained at the school level is essentially a function of teacher training and opportunity-to-learn factors. I found that teacher training is a significant predictor of civic knowledge. Whether or not the teacher holds a degree in civics predicts an increment of one quarter of a standard deviation in civic knowledge. Opportunity to learn is likewise a significant predictor, as students of well-trained teachers cover more civics-related topics in class and score almost one standard deviation higher in civic-knowledge tests than the students of less trained teachers.

The third finding is that the school effect varies across nations. In all countries, student background and expectations explain more of the variability in civics

achievement than school variables do. Running two-level HLM separately for each country, I found that the strength of school effects varies from very modest in Scandinavian countries to around 25% in the former Soviet Union. In fact, in eleven out 27 countries studied, none of the school variables were found statistically significant.

The fourth result suggests that there is no HL effect measurable using civics as an outcome variable. In other words, less-developed countries do not show school to have a larger effect than family background. Thus, student achievement in civics is independent of a nation's wealth. The amount of variance in civic knowledge explained by differences among countries is little as 3.8%. Finally, per capita GDP and the Gini index were found not to be significant explanatory variables for civic knowledge.

The results indicate that in spite of the disparities in teacher quality and opportunity to learn, civics achievement shows more variance between schools within countries than other academic subjects—what is more, the results suggest that the school effect on civics is stronger than it is on mathematics and science. Nor is this variability is attributable to national economic development, since I found that civic knowledge is not related with wealth or income distribution among nations.

There are many possible explanations for the findings. As societies become increasingly complex, the school has taken an important role on political education of youth. An understanding of human virtues per se is necessary but insufficient to grasp the complexity of mechanism of voting, no discrimination agendas, understanding immigrations issues, and the role of UN. One hundred years ago, mass schooling was an instrument of the process of political construction of nation-states; today mass education is fully developed and is worldwide. The creation of new states, such as the countries of

the former Soviet Union countries, or the new status of Hong Kong, virtually can not expand schooling, but governments legitimate their vision of the societies through the school system. In order to enhance civic knowledge, a number of strategies have been applied to schools, such as, the creation of student councils, participation in civics programs, including civics as a specific subject, and training teachers. The empirical evidence shows that those schools that have better trained teachers produce better results in civic knowledge test. Noteworthy are the cases of Poland, where all of the teachers in Civiced-99 data hold degree in civics or Scandinavian countries in which national standards equip youth with outstanding civic knowledge.

Although these results are clear, like all studies, there are limitations. First, the data sets used here were cross-sectional and it was not possible to measure the accumulation of civics knowledge between two or more time points. Second, while all students have been educated about the basic rules of the society, civics as an academic subject is introduced at the eighth grade level; consequently, well trained teachers produce better outcome, in civic knowledge. This effect is not found in other subjects partly because at eighth graders have already accumulated a significant amount of knowledge, and the quality of teachers has less effect. Third, civic knowledge is often learned outside the classroom, which is less likely to happen, with eighth graders with mathematics for instance. Most research on school effects takes into account only what happens inside the classroom not at school. This study provides stimuli to develop more advanced models in which the influence on civic knowledge from the classroom can be disentangled from school effect.

This study demonstrates that all students, regardless of nationality, acquire an important part of their knowledge trough schools, confirming that school is one of the main causal forces behind citizenship production. Modeling civic knowledge at the cross-national level has two potential weaknesses. First, the variables included at the cross-national level are only related with the wealth of the nation and income distribution. While it is a reasonable method for modeling human capital production, more research is needed to create a suitable set of national indices that reflect how democracies work. This model would disclose the potential effects of different regimes or other related political variables. Second, as the authors of Civiced-99 have recognize, it is difficult to measure political socialization across countries. Taking countries as a unit of analysis, different statistical methods were applied to confirm that the items discriminate among students. As a result, some items were eliminated for some countries, but we do not know if the items discriminate between low and high achievers at the cross-national level.

Given that the school effect is modest in comparison with the effect of students' the results should not be construed so as to say that schooling does not matter. Baker and LeTendre (2005) affirm that this is a misinterpretation of the empirical evidence when they model math and science as an outcome variable. They argue that the impact of schooling is massive, but schools have relatively homogeneous impact due to their relatively homogenous quality. Following this line of reasoning, smaller school effects do not mean that the school is unimportant in distributing civic knowledge among students.

Overall, the evidence provided in this dissertation reinforces the twin ideas that school is important for producing both human capital and citizens. Training teachers in

civics-related topics may raise the effectiveness of the school in producing youth well-informed about the dynamics of democracies.

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