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Strengths and Weaknesses in U.S. Students' Knowledge and Skills: Analysis from the IEA Civic Education Study

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June 2004

Ways of enhancing knowledge of political institutions, processes and positions are the focus of many prescriptions for improving civic education and civic engagement among young people.

A recent data source including a rigorously developed test of knowledge, provides an opportunity to empirically compare the performance of students in the United States to those in 27 other democratic countries. These data come from the IEA Civic Education Study. The 90,000 14-year-old respondents were tested and also asked about the civic-related topics they had studied and about their expectations for political and civic participation. They were tested in 1999, meaning that they are eligible to vote for the first time in November 2004. These data allows us to examine four important questions comparing young people in the United States to those in other countries:

1. ***In which content topics and areas of civic skills are young people in the United States relatively knowledgeable (and in which areas do they lack knowledge)?*** In answering this question we compare the percentage of the sample of U.S. students correctly answering each of the 38 test questions with the percentage of correct answers across all 28 countries.

2. ***Which groups of young people in the United States possess knowledge and skills in relation to civic and political matters (and which groups do not)?*** Here our primary interest is in differences between those with a strong home educational backgrounds who also are college bound *compared with* those from a weak home educational background who are not college bound.

3. ***How does the study of civic-related topics in school relate to civic knowledge?*** Here we compare the civic knowledge and skills of students in the United States who report studying specific civic-related topics in school with those who do not report studying these topics.

4. ***For which types of expected engagement is civic knowledge important (and for which types is it unimportant)?*** Here we compare students in the United States who have high knowledge scores to those who have low knowledge scores on four types of expected political and civic participation.

Question 1: *In which content topics and areas of civic skills are young people in the United States relatively knowledgeable (and in which areas do they lack knowledge)?*

The IEA Civic Education Study's test data can be examined by looking at the overall performance of the United States in relation to other countries². As part of the basic analysis a scale score for civic knowledge and skills was derived with an international mean of 100 and a standard deviation (measure of variation) of 20. Fourteen-year-olds in the highest performing country scored 111 and the lowest scored 86. Fourteen-year-olds in the United States scored 106 on this test. This was significantly above the international mean. However, this average masks important differences that become clear when the percentage of U.S. students correctly answering each item is compared to the percentage answering correctly internationally.³ Graph 1 contains percentage correct comparisons for 18 of the 38 items in the IEA Civic Knowledge and Skills Test (and others are referred to in the text). The vertical line labeled "0" corresponds to the international percentage correct on a given item. When the red bar is to the right of this vertical line, on that item students in the United States were more likely to answer correctly than the average student internationally. When the red bar is to the left of this line, on that item students in the United States were more likely to answer incorrectly than the average student internationally. We will look at patterns in types of items (items measuring skills in interpreting political communication, items measuring concepts of democracy or citizenship or content knowledge about topics such as economics).

The good news is that students in the United States demonstrate high levels of cognitive skills in interpreting political communication relative to those in other countries. When asked about the meaning of political cartoons, to recognize the difference between a statement of fact and an opinion, or to read a sample election leaflet or a newspaper article, students in the United States excelled in comparison to all the other countries. On 10 out of 11 items of this type (about half of which are displayed in Graph 1) students performed 6 to 23% points above the international average. In summary, when asked to demonstrate practical skills in understanding political communication, students in the United States performed consistently better than students in all the other twenty-seven countries.

In addition to the skills items shown in Graph 1, a larger percentage of students in the United States understood the concept of gender discrimination than in any of the other countries.

Graph 1: Percent of Students Answering Civic Knowledge and Skills Items Correctly in the United States as a Deviation Above or Below the International Mean Percent of Students Answering Correctly

Skills

- Cartoon- History
- Cartoon- Democracy
- Cartoon- Political Leader
- Leaflet- Election Issues
- Election- Explicit Policy
- Election- Implicit Policy

Democracy

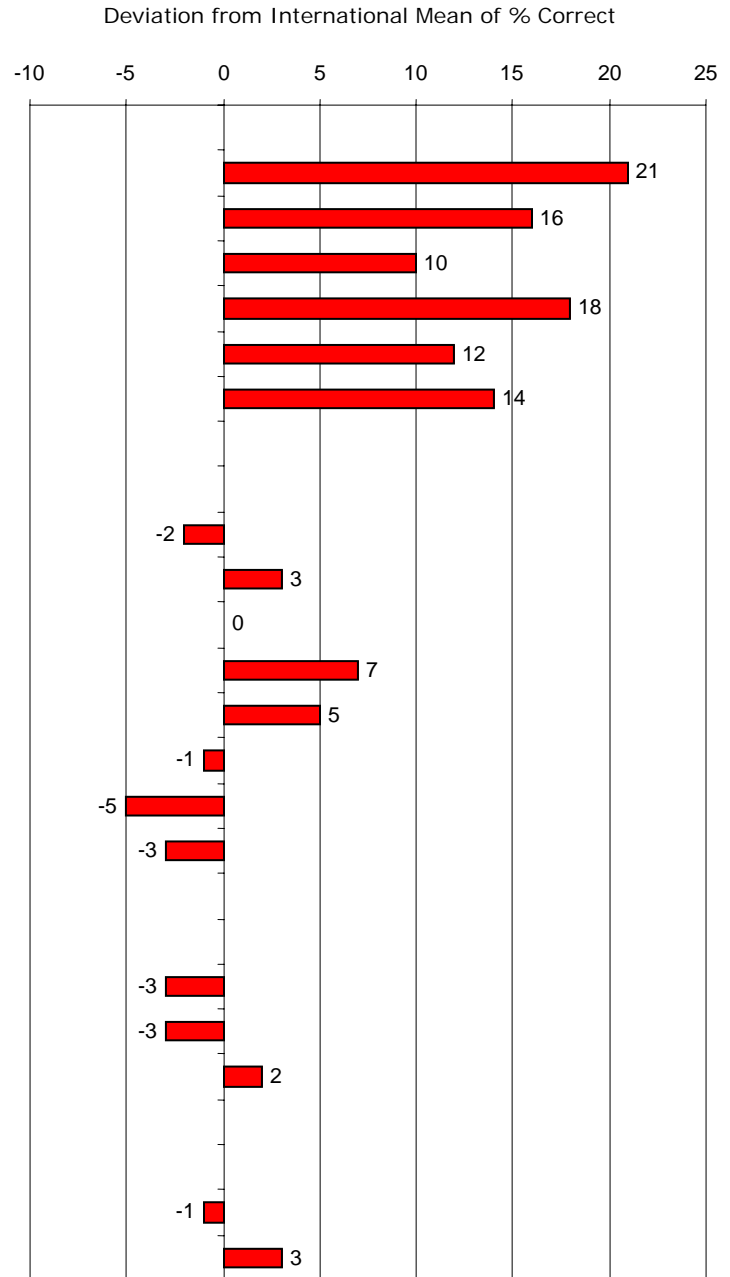
- Who should govern?
- Threat to democracy
- What makes gov't non-dem?
- What is in a Constitution?
- Function of nat'l legislation
- Example of corruption
- Function of periodic elections
- Function of political parties

Citizenship

- Citizen's political rights
- Role of democratic citizen
- Violation of civil liberties

Economics

- What is a market economy?
- Who owns multinational corporations?



Source: IEA Civic Education Study, 1999

Contrasting with this strength in cognitive civic skills, there were a number of other items in the instrument on which students in the United States performed only at an average level. For example, there were 13 items that required students to recognize, define or understand concepts or basic institutions of democracy.

- On five of these items about democracy students in the United States scored 3 or more percentage points above the international average. On an item concerned with the role organizations play in strengthening democracy, U.S. students performed 9 percentage points above the international average; this was the item on which they performed best. Graph 1 shows that on items dealing with understanding what is found in a country's constitution or the function of a national legislature, students in the United States performed 5-7 percentage points above the international average.
- On five of these items about democracy students in the United States performed within 2 percent above or below the international average. For example, students were at or very close to the international average in understanding the role of the people in governing, the nature of non-democratic government, and what constitutes corruption.
- On three of these items about democracy U.S. students were 3 to 5 points below the international average. These include items requiring understanding the role of periodic elections and the function of political parties (Graph 1).

Students in the United States also performed at an average level on items having to do with citizens' rights. They understood the distinction between legal and illegal action on the part of a political organization as well as a reporter's rights (performing 10 to 11% above the international average), and were very close to the international average in their understanding of inappropriate limitations on civil liberties. They were 3 percentage points below the international average in their understanding of the role of a citizen in democracy and citizens' political rights (see Graph 1).

Two other content areas in which students in the United States scored between 3% above and 5% below the international average were those having to do with economics (Graph 1) and with international organizations.

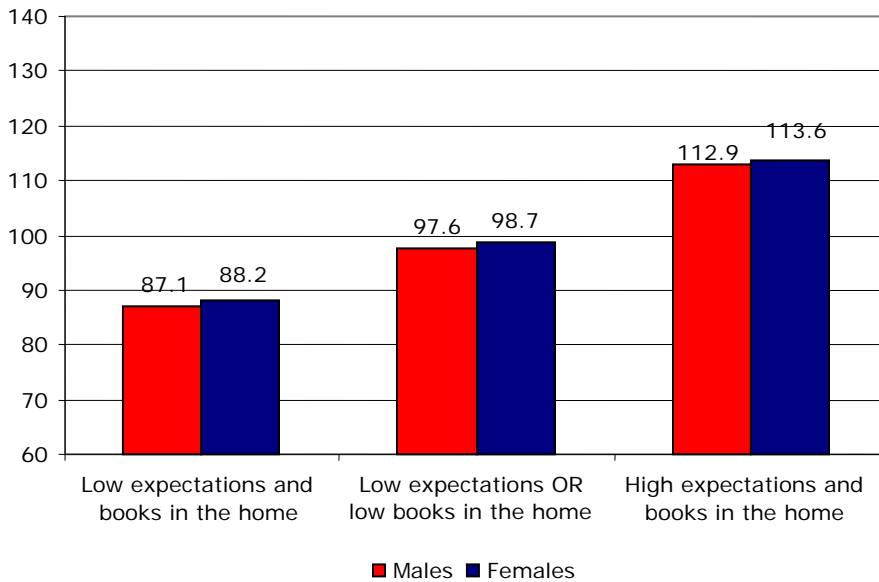
Generally speaking, the performance of fourteen-year-olds in the United States on these content and conceptual items was similar to the performance of students of the same age in countries such as Hungary or the Russian Federation and did not come close to the highest scoring countries (Finland, Greece and Poland).

In summary, although young people in the United States appear prepared to decipher political information that comes to them by way of the mass media, the conceptual foundation that they have concerning democracy and citizenship is only average when they are compared with students in other countries (even some in new democracies).

Question 2: Which groups of U.S. young people possess knowledge and skills in relation to civic and political matters (and which groups do not)?

Again, the news about strengths first: There are very small (and insignificant) gender differences in political knowledge in the United States (compare the red bars to the blue bars in Graph 2). Very few of the other 27 participating countries had significant gender differences either.

Graph 2: Mean Civic Knowledge Scores by Home Resources/Educational Expectations and Gender for the United States.



Source: IEA Civic Education Study, 1999

The disquieting news is that there are large differences in knowledge between those students who come from homes with many literacy or educational resources who expect to attend college *and* those students who lack these resources and do not expect to attend college (or may not even plan to complete high school). Compare the three sets of bars in Graph 2. Students with many educational resources and high expectations have a mean knowledge score of about 113; the students who

come from home backgrounds lacking literacy resources who do not plan to attend college have a score of only about 88. This is nearly as low as the average student in the poorest-scoring countries in the IEA study. In the United States the difference between the advantaged and the disadvantaged groups is about 3/4 of a standard deviation, which is a larger difference between high and low groups than in most of the other countries in the study.

The national report on the IEA Study from the United States indicates similar deficiencies in civic knowledge among students who attend high poverty schools and students whose parents have low levels of education.⁴

Many students, especially those who do not have educational advantages at home or who plan to drop out of high school, are being left behind in their preparation for participation in the democratic system of the United States. Performance differences appear in their civic knowledge and, more troubling, in their expectations that they will vote. Among students who come from homes with literacy advantages who also plan to go to college the percentage who expect to vote is 56.9%; in contrast, among students who have neither home advantages nor college expectations, the percentage who expect to vote is only 18.7%.

To argue that we should wait until the senior year in high school to begin programs to engage students in citizenship or that only high-performing schools can afford time for civic education risks missing the group that most needs meaningful opportunities to acquire civic knowledge.

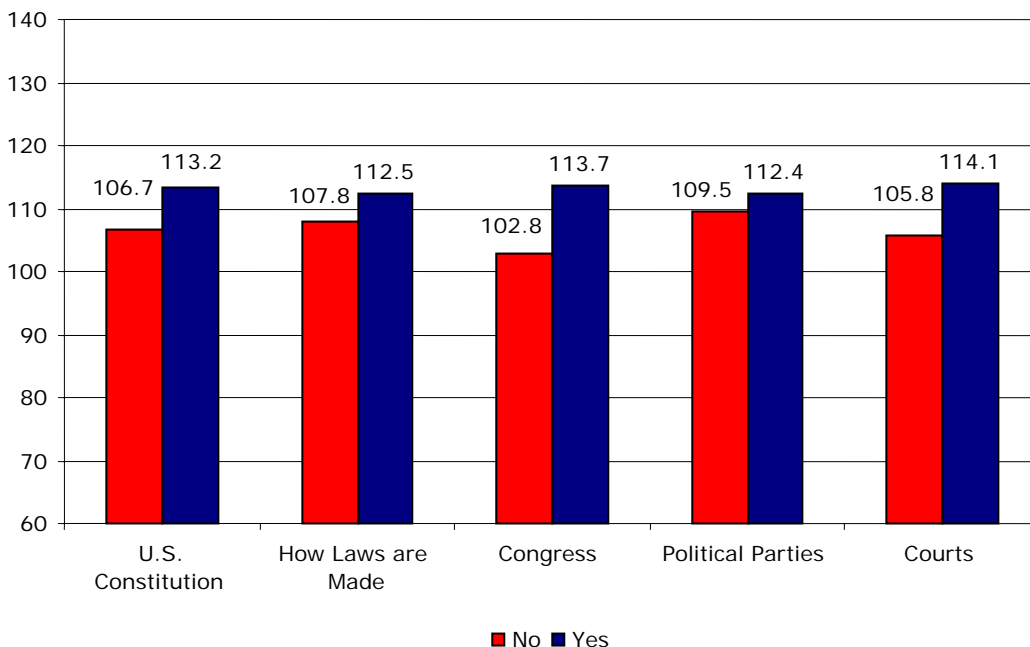
Question 3: How does the study of civic-related topics in school relate to civic knowledge?

Students tested in the IEA Civic Education Study in the United States were asked about their current and recent classroom experiences. Almost two thirds of them reported studying social studies almost every day. Those who did have such frequent social studies instruction had higher civic knowledge scores than those who had social studies instruction less frequently.⁵ Likewise, those who wrote long answers to social studies questions at least once or twice a month had higher knowledge scores than those who wrote answers less frequently.

According to the IEA respondents the civic-related topics most frequently studied in U.S. social studies classes were the Constitution, how laws are made, and Congress.⁶ Covered less frequently (but still by a substantial proportion of students) were political parties, the court system, state and local government, and the President (and the cabinet). This corresponds to the pattern observed in the recent CIRCLE survey, where young adults were asked retrospectively about the topics emphasized in their classes. According to the IEA respondents, reading the textbook and filling out worksheets were the most common instructional activities.

Graph 3 compares the civic knowledge scores according to whether the student reported having studied five topics. In each case, students who studied the topic performed better on the knowledge test than those who did not. The differences were relatively large and statistically significant for study of Congress and the courts.

Graph 3: Mean Civic Knowledge Scores of Students in the United States who Had (or Had Not) Studied the Following Topics:



Source: IEA Civic Education Study, 1999

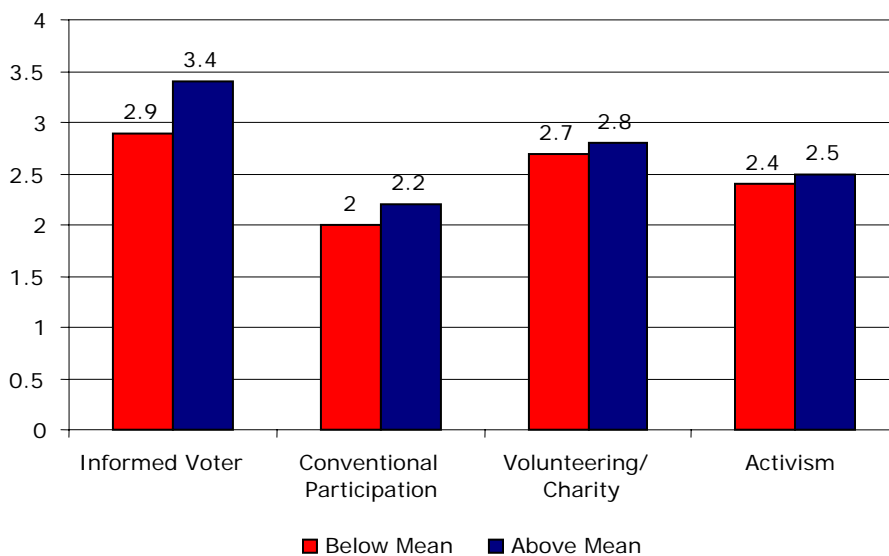
Question 4: For which types of expected engagement is civic knowledge important (and for which types is it relatively unimportant)?

Because of the importance of civic education as it contributes to students' expectations of participation, a number of our analyses have looked at the correlates of different types of engagement controlling for other factors.⁷ Graph 4 summarizes these more complex analyses showing that civic knowledge makes a difference for expected electoral activity and not for other types of participation. Students were asked whether they intended to vote and whether they intended to get information about candidates before voting. The highest possible score on this index is 4, the lowest 1. The difference between those high and low in knowledge is between respondents saying they are likely to vote/get candidate information and saying they are somewhat likely to vote/get information.

There is a slight tendency for those low in knowledge to have lower expectations for conventional participation that goes beyond voting (e.g., joining a political party and writing letters about political issues), but it is not statistically significant. There is virtually no difference between students with high and low levels of knowledge in the likelihood that they will volunteer or contribute to charities or in the likelihood that they will participate in a protest or collect signatures for a petition. To summarize, although civic knowledge is important in predisposing students to vote, it is not important in priming other types of civic and political participation.

Many of our analyses indicate that voting is different from other types of participation (such as volunteering or activist activities). Voting is a duty highlighted in school both implicitly (in American history, for example) and explicitly (in other civic-related instruction in social studies). In our analysis of the IEA data we have consistently found that civic knowledge, learning about the importance of elections/voting at school, reading political news in the newspaper, and religious organization membership are all associated with the likelihood of voting in the United States. Looking internationally, knowledge and study in school are associated with the likelihood of voting across countries, but the association between belonging to a religious organization and likelihood of voting is weak or nonexistent in most countries other than the United States.

Graph 4: Differences in Four Types of Expected Participation between Students with High and Low Civic Knowledge in the United States



Source: IEA Civic Education Study, 1999

Notes

1 For a more complete description of the IEA Civic Education Study, refer to the following two international reports (found at www.wam.umd.edu/~iea): "Citizenship and Education in Twenty-Eight Countries: Civic Knowledge and Engagement at Age Fourteen", by J. Torney-Purta, R. Lehmann, H. Oswald, and W. Schulz, Amsterdam: IEA, (2001) and "Civic Knowledge and Engagement: An IEA Study of Upper Secondary Students in Sixteen Countries", by J. Amadeo, J. Torney-Purta, R. Lehmann, V. Husfeldt, and R. Nikolova, Amsterdam, IEA (2002). For details about availability of data and its use, contact CEDARS (Civic Education Data and Researcher Services, jt22@umail.umd.edu)

2 All graphs are based on data from the IEA Civic Education Study. Nationally representative samples of 14-year-olds tested in 1999 totaled 2811 students in the United States. The international averages are based on nationally representative samples of students in all 28 of the participating countries: Australia, French-speaking Belgium, Bulgaria, Chile, Colombia, Cyprus, the Czech Republic, Denmark, England, Estonia, Finland, Germany, Greece, Hong Kong, Hungary, Italy, Lithuania, Latvia, Norway, Poland, Portugal, Romania, the Russian Federation, Slovakia, Slovenia, Sweden, Switzerland, and the United States. Computing an IRT score for knowledge is standard practice in studies such as NAEP and the IEA studies. See Chapter 3 of Torney-Purta, et al. (2001).

3 The international percentages correct and more descriptive information about the items are found in Appendix A.1 of Torney-Purta, et al. (2001) (cited in footnote 1). The full text of many of these items is found at www.wam.umd.edu/~iea. The percentages answering correctly in the United States for all the test items can be found in "Strengthening Democracy in the Americas: An Empirical Study of the Views of Students and Teachers," by J. Torney-Purta and J. Amadeo, Washington, DC: Organization of American States (2004). www.oas.org/udse.

4 "What democracy means to ninth graders: U.S. results from the International IEA Civic Education Study," by S. Baldi, M. Perie, D. Skidmore, E. Greenberg, and C. Hahn, Washington, D.C.: National Center for Educational Statistics (2001).

5 Baldi, et al., reports this result on p 31. See also "Civic Curriculum and Civic Skills," by M. Comber, College Park: CIRCLE (2003) and "Developing Citizenship Competencies from Kindergarten through Grade 12," by J. Torney-Purta and S. Vermeer, Denver, Education Commission of the States (2004). www.ecs.org/nclc/competenciespaper

6 Baldi, et al. reports this result on p. 32.

7 See J. Torney-Purta, W. Richardson, and C. Barber, "Trust in Government-related Institutions and Civic Engagement among Adolescents." College Park, CIRCLE (2004) for some of the analyses.