Civic knowledge and expected civic engagement among lower-secondary students

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Abstract

Based on survey data from the latest implementation of the International Civic and Citizenship Education Study (ICCS 2016), this paper explores the associations between students' civic knowledge, their disposition to and involvement in civic engagement within the school and community context, and their willingness to engage in future civic activities as adults. The multivariate analyses also include factors related to resources for engagement, variables reflecting the psychological disposition towards engagement, and network-related variables in order to explain variation in expected electoral and active political participation. The results show that civic knowledge is related in different ways to expectations of future participation. While students' civic knowledge is positively related to expectations to engage in elections and voting, more knowledgeable students were less willing to consider more active forms of participation.

Background and research questions

While adolescents are not able to participate in civic activities in the same ways as adult citizens (e.g., through voting or becoming candidates in elections), research evidence suggests that more open and democratic forms of how school relates to its students can contribute to higher levels of political engagement among students (see, for example, Mosher, Kenny, & Garrod, 1994; Pasek, Feldman, Romer, & Jamieson, 2008), to higher levels of civic knowledge (Torney-Purta et al., 2001; Schulz, Ainley, Fraillon, Kerr, & Losito, 2010; Schulz, Ainley, Fraillon, Losito, Agrusti, & Friedman, 2018) and that participation in school-based political activities tends to have a positive influence on future civic engagement as adults (Keating & Janmaat, 2015; Schulz, Ainley, & Fraillon, 2013).

Prior research using data from ICCS has shown that students' expected participation in elections or political activities is associated with gender, interest in civic issues, experience in civic engagement, self-efficacy, civic knowledge, and perceptions of civic institutions (see Schulz et al., 2010; Schulz et al., 2018). Similar findings have also emerged from other research investigating factors associated with students' civic engagement (Solhaug, 2006; Quintelier, 2008). Research findings also suggest, that civic knowledge is not consistently related with student engagement (Schulz et al., 2018).

Verba, Scholzmann and Brady (1995) distinguished the following three groups as factors as predictors of political participation of individuals: (i) Resources enabling individuals to participate (time, knowledge); (ii) psychological engagement (interest, efficacy); and (iii) "recruitment networks," which help to bring individuals into politics (these networks include social movements, church, groups, and political parties). Following this classification, for the analyses in this paper we used three types of predictors to explain variation in students' expected electoral participation (such as voting in national elections) and expected active political participation (such as joining a political party).

As *resource-related variables* we used civic knowledge (as measured by the ICCS cognitive assessment), socio-economic background (a composite indicators based on student reports on parental education, parental occupation and home literacy resources), parental interest in political and social issues and gender. Gender is included in this category as socialisation into gender roles may have an effect on whether young people expect to engage as citizens in the future.

As *variables related to psychological engagement* we used citizenship self-efficacy, i.e. students' beliefs about their ability to undertake civic activities, their interest in political and social issues, their endorsement of the value of participation at school, and their trust in civic institutions. The latter two

variables reflect the extent to which young people believe in the value of engagement (here: at school) and the trustworthiness of civic institutions.

As *recruitment-related variables* we employed the reported past or current participation in groups or organisations in the community and in civic activities at school. While at this age young people may face limitations with regard to political participation, these types of engagement both in the community as well as within the school context are potential networks that foster future engagement.

Prior to an analysis of factor explaining variation in expected participation, we will describe the extent and variation of students' expected electoral participation and their expected active political participation across the first two cycles of ICCS in 2009 and 2016.

This paper will explore the following research questions:

1. *To which extent do students expected to engage in civic activities across participating countries in ICCS 2016 and where there any changes since 2009 (in terms of electoral and active political participation)?* It is expected that there are similar patterns of expectations across different types of engagement across countries.

2. *Which are the associations of factors related to the resources for engagement (such as SES or civic knowledge), psychological engagement (such as self-efficacy) and recruitment-related variables (such past/current civic participation) with students' expectations of future participation* It is expected that there are differences in associations depending on the type of expected engagement as well as variations across countries.

Data and methods

Data

In 2016, ICCS gathered data from more than 94,000 Grade 8 students in 3800 schools in 24 countries (Schulz et al., 2018). These student data were augmented by data from more than 37,000 teachers in those schools. Our analyses focus on the 21 countries in ICCS 2016 that satisfied the participation requirements established by the IEA to reduce the risk of non-participation bias. Eighteen of these 21 countries had participated in ICCS in both 2016 and 2009 and these provide the bases for commenting on changes over time. ICCS employed two-stage cluster sampling procedures within countries. During the first stage, schools were sampled from a sampling frame with a probability proportional to their size. During the second stage, students were randomly sampled within schools (see technical details in Schulz, Carstens, Losito, & Fraillon, 2018).

Measures

Responses to the student questionnaire were used to measure many of the constructs underpinning the scales and items in our paper. IRT (Item Response Theory) scaling was used to derive the scales. The four scales which are used were based on common items across cycles allowing comparisons between ICCS 2009 and 2016. These 2016 scales were equated to those used in ICCS 2009. For these scales, 50 reflects the mean and 10 the standard deviation of all equally weighted countries that participated in ICCS 2009 (see details in Schulz & Friedman, 2018).

Criterion variables

- *Expected electoral participation* was measured with a scale based on items concerned with voting at elections and seeking information about candidates. Students were asked to use the

following response categories: "I would certainly do this," "I would probably do this," "I would probably not do this," and "I would certainly not do this"). The activities listed were (a) "vote in local elections" (85%: certainly or probably); (b) "vote in national elections" (85%: certainly or probably); and (c) "get information about candidates before voting in an election" (80%: certainly or probably). The students' responses to these items formed a highly reliable scale (α = 0.83) reflecting intended electoral participation that we were able to equate to the scale established in ICCS 2009.

- *Expected active political participation* was measured with a scale based on five items that asked them how likely students would be to participate at some future date in the following activities: (a) "help a candidate or party during an election campaign" (44%: certainly or probably); (b) "join a political party" (26%: certainly or probably); (c) "join a trade union" (32%: certainly or probably); (d) "stand as a candidate" (24%: certainly or probably); and (e) "join an organization committed to a political or social cause" (34%: certainly or probably). The scale proved to be highly reliable (α = 0.85) and we were able to equate the 2016 scale scores to the scale scores in ICCS 2009.

<u>Independent Variables</u>

We used the following predictor variables for multiple regression analyses explaining variance in the four criterion variables:

- Resource-related variables
    - Students' *gender* (female = 1, male = 0).
    - *Socioeconomic background* using a composite indictor from parental occupation, education and the number of books at home, where scale scores were nationally standardized to having averages of 0 and standard deviations of 1 in each country.
    - *Parents' interest in political and social issues* is included as dichotomous variables with a value of 0 indicating no or little parental interest, and a value of 1 that students reported that at least one of their parents was quite or very interested.
    - *Civic knowledge* based on a test of 87 items, which included 42 items from ICCS 2009, as described in a companion paper in this symposium (Fraillon, Gebhardt & Schulz, 2018)). In the (preliminary) analyses underlying the results presented in this paper we used the first plausible value in a nationally standardised metric with national averages of 0 and national standard deviations of 1.
- Psychological engagement:
    - *Students' sense of citizenship self-efficacy* was based on seven items reflecting students' confidence in undertaking different civic engagement activities and had satisfactory reliability on average across countries (α = 0.84). (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1)
    - *Students' interest in political and social issues* is included as dichotomous variables with a value of 0 indicating no or little interest, and a value of 1 that students were quite or very interested.
    - *Students' valuing of participation at school* as reported by students and measured as a scale based on five items with satisfactory reliability across countries (α = 0.78). (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1)
    - ICCS 2016 used the same item set as in ICCS 2009 to measure student *trust in civic institutions*. As in ICCS 2009, we used six items (national government, local

government, national parliament, police, courts of justice, political parties) to derive a scale reflecting students' trust in civic institutions. This IRT scale had high reliability across countries (α = 0.85), and we equated it with the scale used in ICCS 2009. The response scale was: "completely," "quite a lot," "a little," or "not at all. (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1)

- Recruitment-related variables:
    - *Students' civic participation at school* was measured based on six items reflecting past or current participation in civic activities at school and has on (marginally) satisfactory reliability across participating countries (Cronbach's alpha = 0.67) with higher scales scores indicating higher levels of participation (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1).
    - *Students' civic participation in community organizations and groups* was based on seven items reflecting past or current participation in community activities (IRT scale, nationally standardized scores with averages of 0 and standard deviations of 1)

Analyses

The paper includes comparisons of results for students' trust in civic institutions, civic knowledge and their expected participation in the future for 2016 and, where appropriate, also in comparison with data from 2009.[1] It also includes results from a multivariate analysis to explain students' expected political participation. For all these analyses, significance tests were conducted for the calculation of population parameters (such as percentages, averages or regression coefficients) that were based on jack-knife repeated replication (JRR) to compute standard errors (Schulz, 2018).

We also employed multivariate regression analyses to review factors associated with variation in students' expectations of political participation. Because we found relatively low proportions of between-school variation in the dependent variable, a single-level multiple regression approach was chosen when analysing the factors explaining variation. All estimates of the percentage of explained variance were obtained by multiplying R^2 by 100. In the reporting tables we present unstandardised regression coefficients which reflect net changes corresponding to one national standard deviation for predictors that are scales (e.g. civic knowledge) or the estimated net difference between comparison groups in case of dichotomous indicators (e.g. parental interest).

The regression modelling was first carried out using all variables in the model, and then separately without each one of the predictor blocks (i.e. resource-related variables, variables related to psychological engagement, and recruitment-related variables). Comparisons between these additional three models and the model with all predictors enabled us to estimate how much of the explained variance is attributable uniquely to each of the predictors or blocks of predictors, and how much of the variance is explained by these predictors or blocks of predictors in combination.[2]

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[1] For comparisons of scale scores between the two cycles in 2009 and 2016, an equating error term was added to the formula for the standard error of the difference between countries because the process of equating the tests across the cycles introduces additional error into the calculation of any test statistic.

[2] The differences between each of the comparison models with the full model provide an estimate of the unique variance attributable to each block of variables. The difference between the sum of block variances and the explained variance by all predictors provides an estimate of the common variance attributable to more than one block of variables.

Results

The scales reflecting students' expected electoral and active political participation were equated so that results can be compared across the first two cycles of ICCS. **Error! Not a valid bookmark self-reference.** shows the national average scores for ICCS 2016 in comparison with ICCS 2009.

Table 1 National average scales scores indicating students' expected electoral participation and active political participation in 2016 and 2009

Country	Expected electoral participation				Expected active political participation			
	2016		2009	Differences (2016 - 2009)	2016		2009	Differences (2016 - 2009)
Belgium (Flemish)	49 (0.3)	▽	46 (0.2)	**3.0** (0.4)	46 (0.3)	▼	46 (0.2)	0.6 (0.4)
Bulgaria	50 (0.3)	▽	48 (0.3)	**1.9** (0.4)	50 (0.3)	▽	48 (0.3)	**2.1** (0.4)
Chile	50 (0.2)	▽	50 (0.3)	0.3 (0.4)	50 (0.2)	▽	52 (0.2)	**-2.2** (0.3)
Chinese Taipei	53 (0.2)	△	51 (0.2)	**2.1** (0.3)	50 (0.2)	▽	47 (0.2)	**2.6** (0.3)
Colombia	53 (0.2)	△	54 (0.2)	-0.5 (0.3)	53 (0.3)	△	53 (0.2)	0.2 (0.3)
Croatia	51 (0.2)		-	-	50 (0.2)		-	-
Denmark†	52 (0.2)	△	49 (0.2)	**3.3** (0.3)	51 (0.1)		48 (0.3)	**2.3** (0.3)
Dominican Republic	53 (0.2)	△	52 (0.3)	**0.9** (0.3)	60 (0.3)	▲	53 (0.3)	**7.2** (0.4)
Estonia[1]	48 (0.2)	▼	47 (0.3)	**1.4** (0.4)	48 (0.2)	▽	-	- (0.2)
Finland	51 (0.2)	▽	49 (0.2)	**1.5** (0.3)	49 (0.2)	▽	48 (0.3)	0.5 (0.3)
Italy	54 (0.2)	△	54 (0.2)	0.1 (0.3)	51 (0.2)		49 (0.2)	**1.4** (0.3)
Latvia[1]	49 (0.2)	▽	50 (0.3)	-0.7 (0.4)	50 (0.2)	▽	49 (0.2)	**0.7** (0.3)
Lithuania	52 (0.2)	△	52 (0.2)	0.4 (0.3)	52 (0.2)	△	49 (0.2)	**2.7** (0.3)
Malta	50 (0.2)	▽	49 (0.4)	0.7 (0.4)	50 (0.2)	▽	47 (0.3)	**3.4** (0.3)
Mexico	52 (0.2)	△	53 (0.2)	**-0.7** (0.3)	55 (0.2)	▲	54 (0.2)	**0.8** (0.3)
Netherlands†	47 (0.3)	▼	-	-	48 (0.2)	▼	-	-
Norway (9)[1]	54 (0.1)	▲	52 (0.3)	**2.1** (0.4)	49 (0.1)	▽	49 (0.2)	-0.2 (0.3)
Peru	55 (0.2)	▲	-	-	56 (0.2)	▲	-	-
Russian Federation	51 (0.3)	▽	51 (0.2)	-0.6 (0.4)	50 (0.3)	▽	49 (0.3)	**1.3** (0.4)
Slovenia	50 (0.3)	▽	50 (0.2)	0.1 (0.3)	49 (0.2)	▽	-	- (0.2)
Sweden[1]	53 (0.2)	△	49 (0.3)	**4.2** (0.4)	50 (0.3)	▽	50 (0.2)	-0.4 (0.3)
Average ICCS 2016	51 (0.0)				51 (0.1)			
Average common countries	*51 (0.1)*		*50 (0.1)*	**1.1** (0.1)	*51 (0.1)*		*50 (0.1)*	**1.4** (0.1)

National ICCS 2016 results are:

more than 3 score points above ICCS 2016 average ▲

significantly above ICCS 2016 average △

significantly below ICCS 2016 average ▽

more than 3 score points below ICCS 2016 average ▼

() Standard errors appear in parentheses. Statistically significant changes (p < 0.05) between 2009 and 2016 are displayed in **bold**.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling paticipation rates only after replacement schools were included.

[1] National Defined Population covers 90% to 95% of National Target Population

- No comparable data available.

For both scales there was variation across countries, with the highest scores for electoral participation found in Norway and Peru, while the (relatively) lowest scores were observed in Estonia and the Netherlands. For expected active political participation, the highest level of expectations was reported in three Latin American countries (Dominican Republic, Mexico and Peru) while the lowest scores were found in Belgium (Flemish) and the Netherlands.

In nine countries statistically significant increases in expected electoral participation since ICCS 2009 were recorded while in Mexico there was slight but significant decrease. Furthermore, in nine countries, expectations of active political participation significantly increased since ICCS 2009, while in two countries (Latvia and Russia) significant decreases were recorded. There were four countries (Bulgaria, Chinese Taipei, Denmark and the Dominican Republic) with significantly increases for both scales since 2009.

When regressing scale score reflecting students' expected electoral participation on our set of predictor variables, we observed that among the resource-related factors civic knowledge was a consistently positive predictor: On average across countries, there were increases of 2.3 score points associated with a change of one national standard deviation (Table 2). Another important and consistent positive predictor in this group of factors was parental interest in political and social issues; here, after controlling for other factors students with at least one interest parent or guardian had on average 2.3 score points more than those without interest parents or guardians. In ten countries, we observed statistically significant positive net associations between students' socioeconomic background and expected electoral participation, however, the average effect was small with 0.3 scale score points. Associations with (female) gender were not consistent.

All four predictors related to students' dispositions for psychological engagement tended to have consistently significant positive effects. Students who believed in their ability to undertake civic engagement tasks were also more likely express expectations of electoral participation. Their interest in political and social issues had positive net associations in all but one country (Dominican Republic), and their trust in civic institutions was also a consistent positive predictor. Students who endorsed the value of participating at their schools were likewise more likely to expect electoral participation in the future.

While part or current participation in civic activities at school had positive net associations in more than half of the countries, the size of regression coefficients is rather small. In only four countries we observed significant effects of students' part or current participation in groups or organisations in the community.

Table 2 Multiple regression coefficients for students' expected electoral participation

Country	Resource-related variables				Variables related to psychological engagement				Recruitment-related variables	
	Gender (female)	Indicator of socioeconomic background	Parental interest in political/social issues	Civic knowledge	Sense of self-efficacy	Interest in political/social issues	Valuing student participation at school	Level of trust in civic institutions	Participation in community groups or organisations	Participation in civic activities at school
Belgium (Flemish)	**-0.8** (0.3)	0.0 (0.2)	**1.7** (0.4)	**2.5** (0.2)	**1.2** (0.3)	**2.6** (0.5)	**0.9** (0.1)	**1.4** (0.2)	0.3 (0.2)	0.3 (0.2)
Bulgaria	0.1 (0.4)	-0.2 (0.3)	**2.9** (0.5)	**2.8** (0.3)	**1.6** (0.3)	**2.1** (0.4)	**0.7** (0.2)	**2.2** (0.2)	0.2 (0.2)	0.2 (0.2)
Chile	0.5 (0.3)	0.1 (0.1)	**2.5** (0.4)	**2.8** (0.1)	**2.1** (0.2)	**1.3** (0.3)	**1.0** (0.1)	**2.7** (0.2)	0.1 (0.2)	**0.9** (0.2)
Chinese Taipei	0.0 (0.2)	0.2 (0.1)	**1.2** (0.3)	**2.5** (0.1)	**1.1** (0.2)	**1.9** (0.2)	**0.8** (0.1)	**1.2** (0.1)	0.1 (0.1)	**0.4** (0.1)
Colombia	0.0 (0.3)	-0.2 (0.1)	**1.5** (0.3)	**2.2** (0.2)	**1.5** (0.2)	**1.3** (0.3)	**1.4** (0.2)	**1.5** (0.1)	0.3 (0.2)	0.2 (0.2)
Croatia	**-0.7** (0.3)	**0.4** (0.2)	**2.8** (0.4)	**2.5** (0.2)	**1.2** (0.2)	**1.7** (0.3)	**0.8** (0.2)	**1.3** (0.2)	0.0 (0.2)	0.3 (0.2)
Denmark†	**1.2** (0.2)	**0.4** (0.1)	**2.5** (0.3)	**2.2** (0.1)	**1.3** (0.2)	**2.4** (0.2)	**0.5** (0.1)	**1.4** (0.1)	**0.3** (0.1)	**0.5** (0.1)
Dominican Republic (s)	0.1 (0.3)	0.0 (0.1)	**1.9** (0.4)	**1.4** (0.2)	**1.9** (0.2)	0.6 (0.4)	**1.2** (0.2)	**1.4** (0.2)	0.1 (0.2)	**0.6** (0.2)
Estonia[1]	-0.3 (0.3)	**0.3** (0.2)	**2.4** (0.4)	**1.8** (0.2)	**1.3** (0.2)	**1.8** (0.3)	**1.0** (0.2)	**1.9** (0.2)	0.3 (0.2)	0.3 (0.2)
Finland	-0.1 (0.2)	**0.7** (0.1)	**3.0** (0.3)	**2.2** (0.2)	**1.3** (0.1)	**1.8** (0.3)	**0.9** (0.2)	**1.5** (0.2)	0.1 (0.1)	**0.6** (0.1)
Italy	-0.3 (0.2)	0.1 (0.1)	**3.6** (0.5)	**2.4** (0.2)	**1.0** (0.2)	**1.0** (0.3)	**1.0** (0.1)	**1.3** (0.1)	0.1 (0.1)	0.2 (0.1)
Latvia[1]	0.1 (0.4)	**0.9** (0.2)	**2.5** (0.6)	**2.0** (0.2)	**1.4** (0.2)	**2.0** (0.4)	**0.8** (0.2)	**1.6** (0.2)	-0.2 (0.2)	**1.4** (0.2)
Lithuania	0.3 (0.2)	0.1 (0.2)	**2.6** (0.5)	**2.3** (0.2)	**1.2** (0.2)	**1.4** (0.3)	**0.9** (0.2)	**1.9** (0.2)	-0.1 (0.2)	**0.4** (0.2)
Malta	0.1 (0.3)	**0.6** (0.2)	**2.3** (0.4)	**1.7** (0.2)	**1.9** (0.2)	**2.7** (0.3)	**1.1** (0.1)	**1.4** (0.2)	**0.5** (0.1)	0.3 (0.2)
Mexico	0.4 (0.3)	-0.2 (0.1)	**1.7** (0.3)	**2.3** (0.2)	**1.6** (0.2)	**1.1** (0.3)	**1.1** (0.1)	**2.1** (0.2)	0.1 (0.2)	**0.4** (0.2)
Netherlands†	**-1.0** (0.3)	**0.6** (0.2)	**2.9** (0.4)	**3.1** (0.2)	**1.3** (0.2)	**1.5** (0.4)	**0.9** (0.2)	**1.4** (0.2)	**0.4** (0.2)	**0.9** (0.2)
Norway (9)[1]	**0.5** (0.2)	**0.7** (0.1)	**2.2** (0.3)	**2.7** (0.1)	**1.2** (0.2)	**1.1** (0.2)	**0.8** (0.1)	**1.6** (0.1)	0.2 (0.1)	**0.5** (0.1)
Peru	-0.2 (0.2)	-0.2 (0.1)	**1.1** (0.3)	**2.6** (0.2)	**1.4** (0.1)	**1.0** (0.2)	**1.2** (0.2)	**0.9** (0.2)	-0.2 (0.1)	**0.4** (0.1)
Russian Federation	-0.4 (0.3)	0.3 (0.2)	**1.2** (0.4)	**1.4** (0.2)	**1.5** (0.3)	**1.7** (0.3)	**1.1** (0.2)	**2.2** (0.2)	**0.5** (0.2)	**0.8** (0.2)
Slovenia	**-1.6** (0.3)	**0.7** (0.2)	**2.0** (0.5)	**2.5** (0.2)	**1.5** (0.2)	**1.3** (0.4)	**0.8** (0.2)	**1.1** (0.2)	0.1 (0.2)	**0.6** (0.2)
Sweden[1]	0.2 (0.3)	**0.5** (0.1)	**3.0** (0.4)	**1.9** (0.2)	**1.5** (0.2)	**2.5** (0.3)	**0.4** (0.2)	**1.4** (0.2)	-0.2 (0.1)	**0.7** (0.2)
ICCS 2016 average	-0.1 (0.1)	**0.3** (0.0)	**2.3** (0.1)	**2.3** (0.0)	**1.4** (0.0)	**1.7** (0.1)	**0.9** (0.0)	**1.6** (0.0)	**0.1** (0.0)	**0.5** (0.0)

* Statistically significant (p<0.05) coefficients in **bold** .

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.
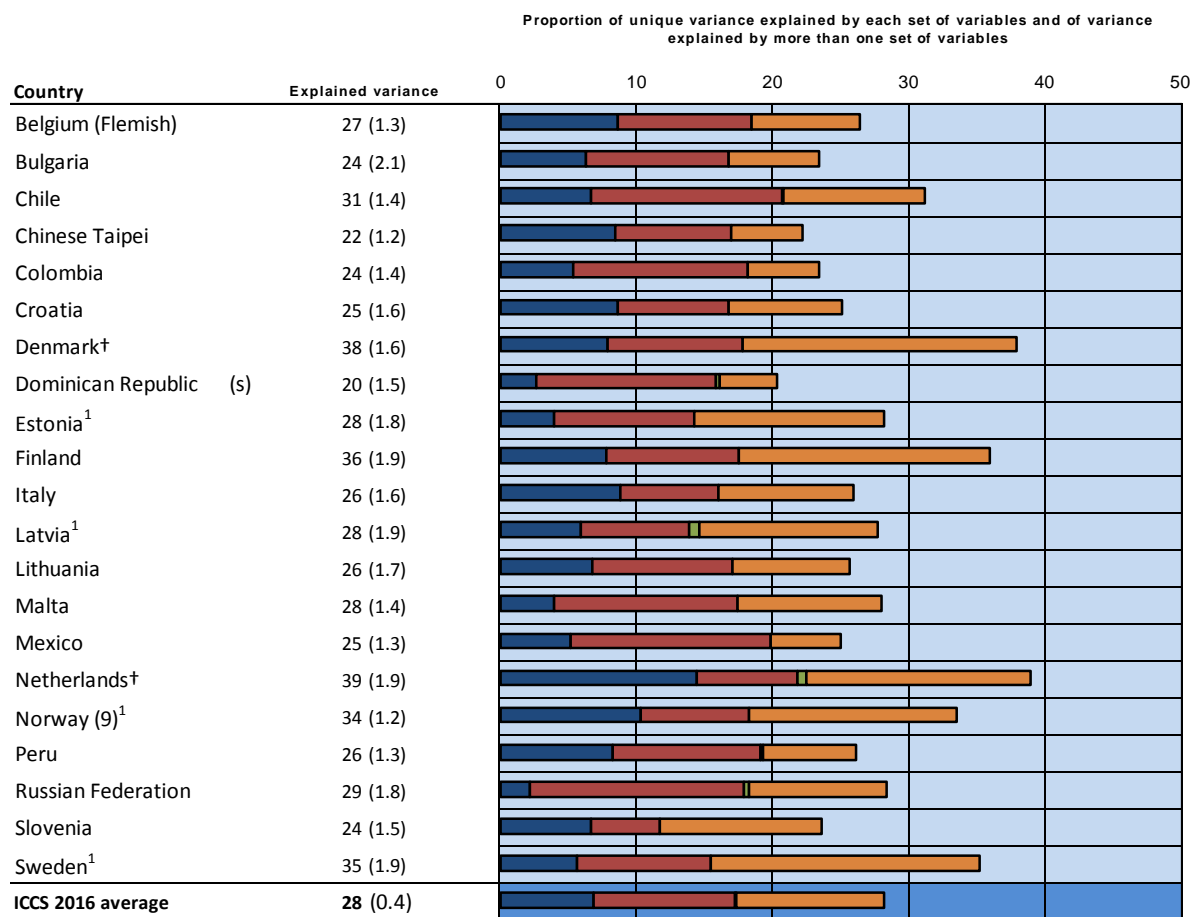
† Met guidelines for sampling paticipation rates only after replacement schools were included.

[1] National Defined Population covers 90% to 95% of National Target Population

An "(s)" indicates that data are available for at least 50% but less than 70% of students.

The model explained on average 28 percent of the variance reflecting expected electoral participation (Table 3), ranging from 20 percent in the Dominican Republic to 39 percent in the Netherlands. The comparison of variance that can be uniquely attributed to groups of predictors illustrates that most of the unique proportion of explained variance is due to factors related to psychological engagement (about 10 percent of the overall variation in score on average across countries), while the second largest proportion of uniquely attributable explained variance is due to resource-related variables (about seven percent on average). Hardly any variance is uniquely explained by recruitment related factors and, on average, there were more than 10 percent of variance explained by more than one block of predictors.

Table 3   Explained variance for students' expected electoral participation

Proportion of unique variance explained by each set of variables and of variance explained by more than one set of variables

Country	Explained variance
Belgium (Flemish)	27 (1.3)
Bulgaria	24 (2.1)
Chile	31 (1.4)
Chinese Taipei	22 (1.2)
Colombia	24 (1.4)
Croatia	25 (1.6)
Denmark†	38 (1.6)
Dominican Republic (s)	20 (1.5)
Estonia[1]	28 (1.8)
Finland	36 (1.9)
Italy	26 (1.6)
Latvia[1]	28 (1.9)
Lithuania	26 (1.7)
Malta	28 (1.4)
Mexico	25 (1.3)
Netherlands†	39 (1.9)
Norway (9)[1]	34 (1.2)
Peru	26 (1.3)
Russian Federation	29 (1.8)
Slovenia	24 (1.5)
Sweden[1]	35 (1.9)
ICCS 2016 average	**28** (0.4)

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling paticipation rates only after replacement schools were included.

[1] National Defined Population covers 90% to 95% of National Target Population

[2] Country surveyed target grade in the first half of the school year.

An "(s)" indicates that data are available for at least 50% but less than 70% of students.

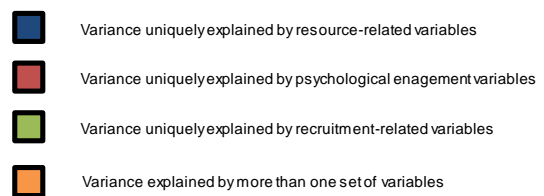■ Variance uniquely explained by resource-related variables

■ Variance uniquely explained by psychological enagement variables

■ Variance uniquely explained by recruitment-related variables

■ Variance explained by more than one set of variables

Table 4

Table 4   Multiple regression coefficients for students' expected active political participation

Country	Resource-related variables				Variables related to psychological engagement				Recruitment-related variables	
	Gender (female)	Indicator of socioeconomic background	Parental interest in political/social issues	Civic knowledge	Sense of self-efficacy	Interest in political/social issues	Valuing student participation at school	Level of trust in civic institutions	Participation in community groups or organisations	Participation in civic activities at school
Belgium (Flemish)	**-0.9** (0.4)	-0.1 (0.2)	**1.8** (0.5)	**-1.3** (0.2)	**2.2** (0.2)	**2.1** (0.5)	0.1 (0.2)	0.5 (0.3)	**0.6** (0.2)	**0.6** (0.2)
Bulgaria	**-1.4** (0.4)	**-0.6** (0.3)	**1.6** (0.5)	**-2.6** (0.3)	**2.9** (0.3)	**1.5** (0.4)	0.3 (0.2)	**1.7** (0.3)	**0.8** (0.3)	0.3 (0.3)
Chile	**-0.8** (0.3)	**-0.6** (0.2)	**1.8** (0.3)	**-1.8** (0.2)	**3.4** (0.2)	**1.3** (0.4)	0.0 (0.2)	**2.7** (0.2)	**0.6** (0.2)	**0.9** (0.2)
Chinese Taipei	**-1.4** (0.2)	-0.2 (0.1)	0.3 (0.3)	**-0.9** (0.1)	**2.6** (0.2)	**1.8** (0.3)	0.0 (0.2)	**1.4** (0.2)	**0.4** (0.1)	**0.5** (0.1)
Colombia	**-0.7** (0.3)	**-0.5** (0.2)	**0.8** (0.4)	**-1.8** (0.2)	**2.5** (0.2)	**1.1** (0.3)	0.3 (0.3)	**2.3** (0.2)	**0.6** (0.2)	0.3 (0.2)
Croatia	**-1.9** (0.4)	-0.2 (0.2)	**2.2** (0.5)	**-1.0** (0.2)	**2.4** (0.2)	**2.1** (0.4)	0.2 (0.2)	**1.4** (0.2)	0.3 (0.2)	**0.5** (0.2)
Denmark†	0.0 (0.2)	0.0 (0.1)	**0.8** (0.3)	**-0.5** (0.1)	**1.8** (0.2)	**1.7** (0.2)	0.1 (0.1)	**0.7** (0.1)	**0.8** (0.1)	0.2 (0.1)
Dominican Republic (s)	**-0.8** (0.4)	-0.4 (0.2)	**1.9** (0.3)	**-1.1** (0.2)	**2.6** (0.2)	0.9 (0.4)	**0.8** (0.2)	**2.1** (0.2)	**0.8** (0.2)	0.4 (0.2)
Estonia[1]	**-1.6** (0.3)	-0.3 (0.2)	**1.1** (0.5)	**-0.9** (0.2)	**2.2** (0.2)	**0.7** (0.3)	0.3 (0.2)	**1.3** (0.2)	**0.9** (0.1)	**0.5** (0.2)
Finland	**-1.1** (0.3)	0.2 (0.1)	**0.8** (0.4)	**-0.5** (0.1)	**2.3** (0.2)	**1.3** (0.3)	0.1 (0.2)	**0.7** (0.2)	**0.6** (0.1)	0.3 (0.2)
Italy	**-1.5** (0.3)	0.1 (0.1)	**2.1** (0.5)	**-0.6** (0.2)	**2.2** (0.2)	**1.2** (0.4)	**0.5** (0.2)	**1.5** (0.2)	**0.7** (0.2)	**0.5** (0.2)
Latvia[1]	**-1.6** (0.4)	-0.1 (0.2)	**1.3** (0.5)	**-1.6** (0.2)	**2.7** (0.2)	**1.8** (0.4)	0.1 (0.2)	**1.5** (0.2)	**0.4** (0.2)	**1.0** (0.2)
Lithuania	**-1.3** (0.4)	0.0 (0.2)	**2.0** (0.5)	**-1.9** (0.2)	**2.5** (0.2)	**1.6** (0.3)	0.1 (0.2)	**1.6** (0.2)	**0.8** (0.2)	0.2 (0.3)
Malta	**-1.9** (0.3)	0.1 (0.2)	**1.2** (0.4)	**-1.9** (0.2)	**3.8** (0.2)	**3.0** (0.3)	-0.2 (0.2)	**1.3** (0.2)	**1.1** (0.2)	**0.4** (0.2)
Mexico	-0.4 (0.3)	**-0.6** (0.1)	**0.8** (0.3)	**-1.7** (0.2)	**3.0** (0.2)	0.9 (0.3)	**0.5** (0.2)	**2.6** (0.2)	**0.7** (0.2)	**0.5** (0.2)
Netherlands†	**-0.7** (0.3)	0.2 (0.2)	**1.9** (0.3)	-0.2 (0.2)	**2.4** (0.2)	**1.7** (0.5)	0.0 (0.2)	**1.1** (0.2)	**1.0** (0.2)	**0.4** (0.2)
Norway (9)[1]	0.0 (0.3)	0.2 (0.1)	**2.3** (0.3)	**-1.2** (0.2)	**2.6** (0.2)	**1.4** (0.3)	0.2 (0.1)	**0.7** (0.1)	**1.0** (0.1)	**0.4** (0.1)
Peru	-0.4 (0.3)	**-0.7** (0.2)	**0.9** (0.4)	**-1.9** (0.2)	**2.5** (0.2)	**1.2** (0.3)	**0.3** (0.2)	**2.0** (0.2)	**0.5** (0.2)	**0.6** (0.1)
Russian Federation	**-1.9** (0.3)	**-0.7** (0.1)	**0.9** (0.4)	**-0.7** (0.2)	**3.8** (0.4)	**1.3** (0.2)	0.3 (0.2)	**1.6** (0.2)	**0.5** (0.2)	**0.7** (0.3)
Slovenia	**-1.5** (0.3)	0.0 (0.2)	**1.0** (0.5)	**-1.1** (0.2)	**1.9** (0.2)	**1.7** (0.4)	**0.4** (0.2)	**1.2** (0.2)	**0.8** (0.2)	**0.5** (0.2)
Sweden[1]	-0.4 (0.3)	-0.3 (0.2)	**2.1** (0.4)	-0.3 (0.2)	**2.5** (0.2)	**2.0** (0.4)	-0.1 (0.2)	**0.9** (0.2)	**0.7** (0.2)	0.4 (0.2)
ICCS 2016 average	**-1.0** (0.1)	**-0.2** (0.0)	**1.4** (0.1)	**-1.2** (0.0)	**2.6** (0.0)	**1.5** (0.1)	**0.2** (0.0)	**1.5** (0.0)	**0.7** (0.0)	**0.5** (0.0)

* Statistically significant (p<0.05) coefficients in **bold** .

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling paticipation rates only after replacement schools were included.

[1] National Defined Population covers 90% to 95% of National Target Population

An "(s)" indicates that data are available for at least 50% but less than 70% of students.
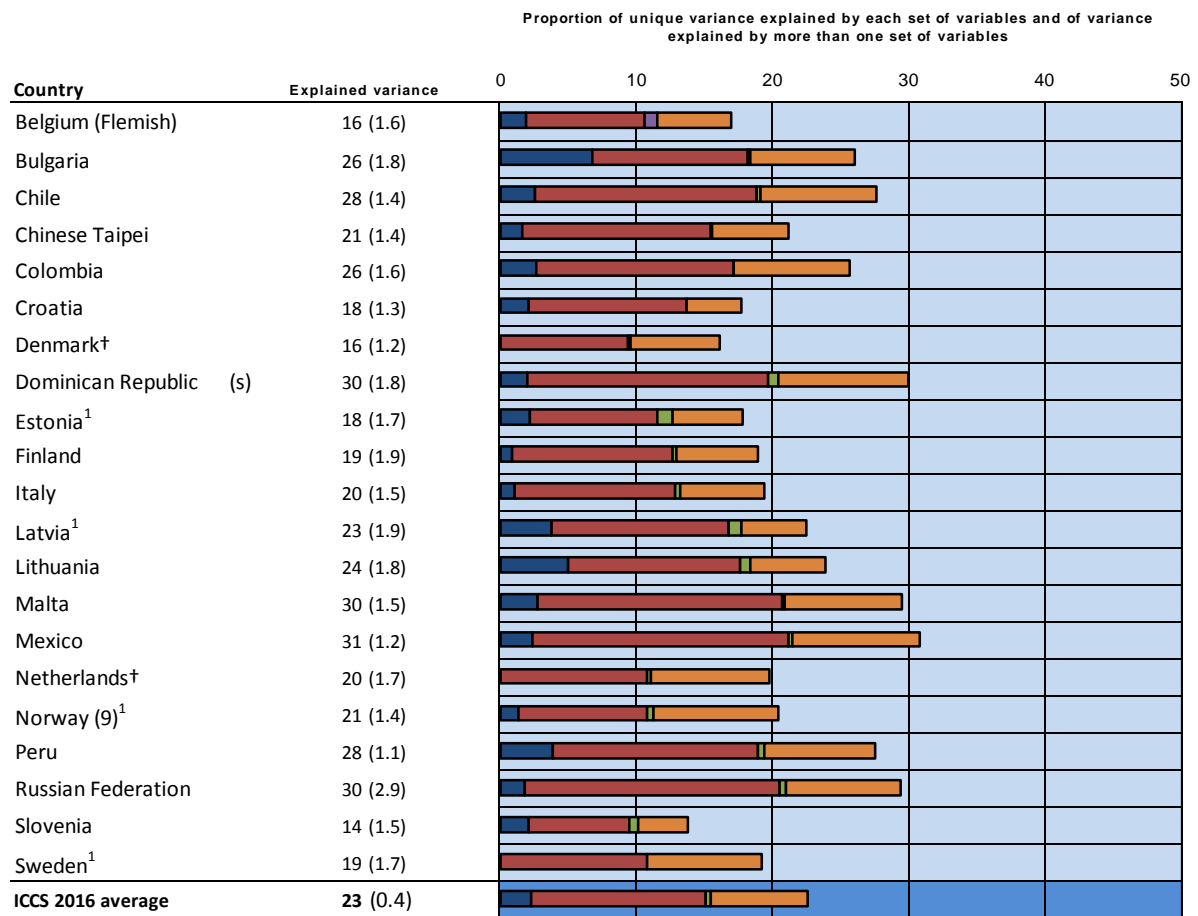
When regressing scale score reflecting students' expectations of active political participation on our set of predictors (Table 4), we observed that while parental interest is a relatively consistent positive predictor across countries (with an average effect of 1.4 score points), civic knowledge had significant negative net associations with expected active political participation (-1.2 score points on average). Female gender was a negative predictor in a majority of countries, and after controlling for all other variables in the model female students had about one score point less than males on average across countries. In six countries we also recorded weak but significantly negative effects of socioeconomic background on expected active political participation.

As for expected electoral participation, citizenship self-efficacy, interest in political and social issues, and trust in civic institutions were consistent positive predictors of students' active political engagement in the future. However, students' valuing of participation at school had significant weak effects in only five countries.

When reviewing the results for recruitment-related factors, past or current participation in community groups or organisations turned out to be a consistent positive and significant predictor across countries. However, the effects were relatively weak (less than one score point corresponded to a change in one national standard deviation). In more than half of the countries, having participated in civic engagement at school was also a positive significant albeit weak predictor; here, half a score point was associated with a change in a national standard deviation.

The model explained on average 23 percent of the variance reflecting expected electoral participation (Table 5), ranging from 14 percent in Slovenia to 31 percent in Mexico. The comparison of variance that can be uniquely attributed to groups of predictors illustrates that most of the unique proportion of explained variance is due to factors related to psychological engagement (about 13 percent of the overall variation in score on average across countries), while only a relatively small proportion of uniquely attributable explained variance was due to resource-related variables (about two percent on average). Again, hardly any variance is uniquely explained by recruitment related factors and, on average, seven percent of the overall variance was explained by more than one block of predictors.

Table 5 Explained variance for students' expected active political participation

Proportion of unique variance explained by each set of variables and of variance explained by more than one set of variables

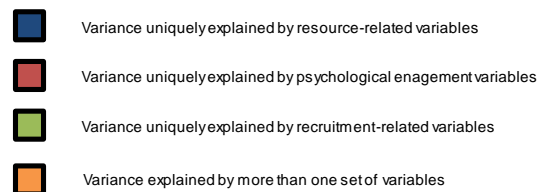| Country	Explained variance
Belgium (Flemish)	16 (1.6)
Bulgaria	26 (1.8)
Chile	28 (1.4)
Chinese Taipei	21 (1.4)
Colombia	26 (1.6)
Croatia	18 (1.3)
Denmark†	16 (1.2)
Dominican Republic (s)	30 (1.8)
Estonia[1]	18 (1.7)
Finland	19 (1.9)
Italy	20 (1.5)
Latvia[1]	23 (1.9)
Lithuania	24 (1.8)
Malta	30 (1.5)
Mexico	31 (1.2)
Netherlands†	20 (1.7)
Norway (9)[1]	21 (1.4)
Peru	28 (1.1)
Russian Federation	30 (2.9)
Slovenia	14 (1.5)
Sweden[1]	19 (1.7)
ICCS 2016 average	**23** (0.4)

() Standard errors appear in parentheses.

(9) Country deviated from international defined population and surveyed adjacent upper grade.

† Met guidelines for sampling paticipation rates only after replacement schools were included.

[1] National Defined Population covers 90% to 95% of National Target Population

[2] Country surveyed target grade in the first half of the school year.

An "(s)" indicates that data are available for at least 50% but less than 70% of students.

■ Variance uniquely explained by resource-related variables

■ Variance uniquely explained by psychological enagement variables

■ Variance uniquely explained by recruitment-related variables

■ Variance explained by more than one set of variables

Conclusion

Analyses of ICCS 2016 data show that factors associated with psychological engagement were of particular importance when explaining variation in students' expected political participation as adults. Most countries recorded positive associations between students' trust in civic institutions, their sense of citizenship self-efficacy as well as their interest in political and social issues, and their expected electoral and active political participation. In particular for expected electoral participation, valuing of student participation at school was another positive predictor.

Experience with civic engagement in the community or at school, which we classified as recruitment-related factors, tended to be positively associated with expectations of political engagement during adulthood, however, these effects were not always consistent and tended to be relatively smaller.

Among the resource-related factors we employed, parental interest was a consistent positive predictor, a finding which emphasises the importance of the home environment for developing engagement in society. Socioeconomic background had weaker and less consistent positive effects on expected electoral participation and in a few countries negative ones on expected active political participation. While gender was not consistently related to expected electoral

Results also show that even after controlling for other variables, more knowledgeable students were more likely than their peers to expect to vote in elections, yet were less likely to expect to be actively involved politically. This latter finding poses an interesting issue as it suggests that higher levels of civic knowledge do not induce young people to develop a disposition for engagement in the traditional or conventional modes of active political participation. It is important to see this is connection with the observed negative association between civic knowledge and trust in institutions (Lauglo, 2013; Schulz, 2019) in particular in countries with high levels of perceived corruption. Students who are more knowledgeable appear to be also more critical, both in their appraisal of institutions as well as of conventional forms of citizen engagement.

In many countries there has been concern about low levels of voter participation among young people and their growing alienation from democracy. The links that the ICCS 2016 findings suggest between civic knowledge, school-based experiences with civic engagement, and expectations to vote and participate in other civic activities in adulthood indicate that promotion of civic and citizenship education, in both formal and informal ways, should be considered as a means of helping young people become more conscious of their political roles and the importance of being participating citizens. However, they also emphasize that a focus on acquisition of knowledge within the civic and citizenship education is not sufficient to promote active civic engagement in the future.

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