

**The Effects of Civic Education on Political Knowledge**  
**A Two Year Panel Survey among Belgian Adolescents**

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**ABSTRACT**

Traditionally political knowledge was regarded as an important potential outcome for civic education efforts. Most of the currently available research, however, tends to focus on non-cognitive goals, despite the fact that studies repeatedly have shown that political knowledge is an important resource for enlightened and engaged citizenship. In this article, we investigate whether civic education contributes to political knowledge levels. The analysis is based on the Belgian Political Panel Survey, a two year panel study among 2,988 Belgian late adolescents. The analysis shows that experiences with group projects at school contribute significantly to political knowledge levels two years later on. Furthermore, we can observe an interaction effect as those who are already most knowledgeable about politics, gain most from these group projects. Classes about politics, on the other hand, did not have an effect on knowledge levels. In the discussion, it is argued that civic education can have strong cognitive effects, but that these effects are not always related to classical civic education efforts.

**KEYWORDS**

civic education, political knowledge, panel research, Belgium, adolescents

## **Introduction**

Political knowledge can be considered as an important prerequisite for meaningful political participation (Delli Carpini & Keeter, 1996; Dalton, 2000). Empirical research has shown in a convincing manner that political knowledge contributes significantly to the propensity of citizens to take part in various forms of political behavior (Ondercin & Jones-White, 2011). Furthermore, political knowledge is associated with a more enlightened party preference, allowing citizens to select the political party that most closely fits their own political and ideological preferences (Andersen, Tilley & Heath, 2005). Political knowledge is an important element of what has been labeled ‘political sophistication’, an attitude that is strongly related to turnout, low levels of prejudice and a willingness to engage in political action. In general, it can be assumed that those who score high on political sophistication are better able to participate in political life, and to get their voice heard in an effective manner in the political decision-making process (Choma & Hafer, 2009). In recent years, the role of political sophistication has been highlighted in a substantial number of publications, and one might label this as a cognitive turn in participation and citizenship research. Not only has it been shown that political knowledge has a strong positive impact on voter turnout and other forms of political participation, there is also strong empirical support for a positive relation between political knowledge and tolerant democratic attitudes (Dassonneville, 2011; Dow, 2011; Green et al., 2011; Larcinese, 2007; Michaud, Carlisle & Smith, 2009; Miller & Orr, 2008; Ondercin & Jones-White, 2011). Dalton (2000, 919), therefore strongly argues that political knowledge should be considered as an important prerequisite for full democratic citizenship: “Any discussion of citizen political behavior is ultimately grounded on basic assumptions about the electorate’s political abilities—the public’s level of knowledge, understanding, and interest in political matters. For voters to make meaningful decisions, they must understand the options that the polity faces. Citizens must have a sufficient knowledge of the workings of the political system if they intend to influence and control the actions of their representatives.” Given all this empirical research, it seems more than legitimate to consider political knowledge as an important outcome of civic education experiences.

While there can be little doubt about the importance of political knowledge for democratic citizenship, within political science education the attention devoted to the topic of political knowledge has been rather mixed. Back in the 1960s, political knowledge was still considered to be an important goal of civic education efforts, and the fact that experiences with civic education did not seem to be associated in a significant manner with gains in political

knowledge was seen as a major source of disappointment (Langton & Jennings, 1968). In subsequent research, however, attention gradually shifted away from these cognitive outcomes. Authors emphasized the fact that not factual knowledge should be the main goal of civic education, but rather the ability to make sense of various forms of political information that citizens are exposed to (Torney-Purta, 2001). It is tempting to see this shift in attention against the backdrop of a general trend in educational research, downplaying the importance of transmitting factual knowledge, and stressing the importance of being able to apply insights and to use them in a creative and personalized manner (Bloom, 1976). Furthermore, civic education itself has changed rather dramatically during the past decades. Numerous schools and education systems now prefer various forms of hands-on instruction, allowing pupils to gain a first-hand experience with the way the political system operates (Youniss, McLellan & Yates, 1997). The trend toward a generalization of community service in secondary schools can be seen as representative for this shift away from classical cognitive-based forms of civic education (Hart et al., 2007).

In this article, we do not wish to question the importance of this new approach, as there is indeed ample empirical evidence available demonstrating that community service experiences have enduring effects on civic engagement and political involvement. What we do want to investigate, however, is whether contemporary practices of civic education still have significant cognitive outcomes, leading to higher levels of political knowledge or political sophistication. There are two theoretical reasons to investigate these cognitive effects. First, it has to be remembered that in most contemporary taxonomies of educational outcomes, cognitive outcomes remain indispensable, as they constitute a first layer where all further and more valuable educational outcomes are being built upon (Anderson & Krathwohl, 2001; Wolak & McDevitt, 2011). Second, we relate to new empirical work, showing that political knowledge does remain a very important resource for citizens: knowledge allows citizens to play a meaningful role in the political process, it allows them to develop and express their political preferences more clearly, and knowledge is associated with a feeling of political empowerment (Delli Carpini & Keeter, 1996; Milner, 2002; Althaus, 2003; Lachat, 2007; Prior & Lupia, 2008). Political knowledge provides citizens with the feeling that they can understand the political system, and that they can play a meaningful role in the decision-making process (Dow, 2011). As such, we believe there are sufficient arguments to claim that cognitive outcomes of civic education should not be neglected.

In this article, we first briefly review the literature on political knowledge, and the effect civic education can have on this form of knowledge. Subsequently we present data and methods, before we analyze and discuss the results of a panel study among Belgian adolescents.

## **Literature**

It is striking to observe that the topic of political knowledge has always been dealt with in a rather ambiguous manner in the literature. In their seminal study on the ‘Civic Culture’, Almond and Verba (1963, 168) stressed the fact that citizens should have a feeling of “subjective competence” to play a meaningful role in political life. This feeling is closely related to what we would now label as ‘political efficacy’, but Almond and Verba carefully avoid the question whether there is also a form of “objective competence”. In some of the more recent research, authors are less hesitant to label political knowledge as a prerequisite for full citizenship (Delli Carpini & Keeter, 1991). According to these authors, there can be little doubt that political knowledge helps citizens to play a meaningful role in democratic politics. If this is the case, however, there is some reason for concern as longitudinal data show quite convincingly that levels of political knowledge among the US adult population certainly have not increased during the past decades, and on the contrary, there are even indications that political knowledge has actually declined (Bennett, 1988; Delli Carpini & Keeter, 1996; Jennings, 1996). While the average education level of the population has risen, and while there certainly is no shortage at all of political information that is available in the mass media, apparently the average citizen now knows less about politics than a couple of decades ago. As such, it seems more than worthwhile to investigate what effect the education system in general, and more particularly civic education experiences, have on political knowledge.

It is clear, however, that a one-sided bias on factual political knowledge could introduce a cognitive bias in our assessment of citizenship skills. This concern has been addressed by including political knowledge in a larger attitudinal and cognitive complex that has been labeled political sophistication (Converse, 1964; Luskin, 1987). Sophistication refers not just to the level and the quantity of factual knowledge, but also to the degree to which knowledge and attitudes are constrained by a logically coherent ideological framework.

There can be little doubt that political sophistication indeed has strong political consequences. Low levels of political sophistication render citizens more vulnerable for campaign effects on their political preferences (Tilley & Wlezien, 2008). Political sophistication has also been shown to allow citizens to achieve collective action more efficiently, so that they can succeed in getting their voice heard in the policy process (Tavits, 2006). Maybe more importantly, political sophistication is closely associated to various forms of tolerance, not just with regard to ethnicity and religious background, but also with regard to sexual orientation and political preference (Sidanius & Lau, 1989). Popkin and Dimock (2000) found that the level of hostility towards immigrants is negatively related to the level of political knowledge. Given the results of this kind of empirical research, there can be little doubt that political sophistication among citizens can and should be considered as an important resource for democratic political systems.

Given the consensus in the literature about the positive consequences and correlates of political sophistication, it becomes all the more relevant to know more about the determinants of political sophistication. First, it has to be noted that education again and again has been shown to be the main determinant of political sophistication (Highton, 2009). Within the literature, however, there is no consensus on the question of how we could explain this positive effect of education on political sophistication. On the one hand, it has been argued that the education system functions as a social sorting mechanism, implying that those with high education levels more frequently will end up in more privileged positions in society. These positions, in turn provide them with access to political information and with an increased motivation to pay attention to political and economic developments. On the other hand, we also assume there are direct cognitive effects, whereby pupils actively remember at least some of the information that they have been exposed to during their education process (Nie, Junn & Stehlik-Barry, 1996). These cognitive effects are also emphasized in the seminal study by Niemi and Junn (1998), showing that experiences with civic education have a significant effect on political knowledge levels of pupils. It has to be remembered however, that the Niemi and Junn study, too, was purely cross-sectional, so it does not inform us about more long-term consequences of civic education experiences.

One can observe in the recent literature on civic education, however, a tendency to move away from the study of cognitive outcomes. First of all, concerns have been raised on the question whether political knowledge can be measured in a reliable manner (Mondak, 2001). More importantly, however, there has been also a more theoretical debate going on about the

goals civic education should pursue. Torney-Purta (1997), among other authors has stated that not just cognitive outcomes of civic education should be stressed, but also the attitudes that can be seen as essential correlates of democratic citizenship. These kinds of variables are assumed to be influenced more strongly by the implicit curriculum and by open classroom climate experiences than by formal education. Indeed, empirical research quite strongly shows that an open classroom climate or experiences with community service have powerful effects on political efficacy and on tolerant attitudes (Campbell, 2008; Claes, Hooghe & Stolle, 2009; Scheerens, 2011). Therefore, we certainly do not wish to question the fact that democratic experiences at school might be very important for future orientations on one's role as a citizen in a democratic political system. Given the importance political sophistication has for citizenship behavior, however, it can be argued that this kind of cognitive outcomes should not be neglected either. With regard to cognitive outcomes, our current knowledge is not all that much further developed than it was after the publication of the Niemi and Junn (1998) study. It has to be remembered, however, that this study has a number of limitations. First of all, it is based on the results of the 1988 National Assessment of Education Progress data gathering, implying that these data are by now more than two decades old, and as such they do not include all that much information about the effects of the innovations in civic education that have been implement since the 1980s. Second, their analysis remains limited to a cross-sectional observation, leading to the clear danger that recall error might be responsible for at least part of the observed relation. If pupils are asked about what kind of civic education experiences they have had, it is more than likely that those with higher levels of knowledge will also be better placed to recall their education experiences. This way of questioning, therefore, might lead to a false positive association between both phenomena. Ideally, therefore, the effects of civic education should be tested in a panel design, where the measurement of the independent (i.e., civic education experiences) and dependent (i.e., civic knowledge) variables has been conducted in an independent manner.

In the current analysis, we wish to build on previous studies, by using a panel design, where cognitive effects of civic education are measured two years after the initial measurement of civic education experiences. We also allow for a full range of civic education methods, thus including new developments within this field. Our main hypothesis is that civic education is not just associated with political knowledge in a cross-sectional manner, but that it will also have long-term effects two years later on. Theoretically, it is relevant to note that in the current study, at the moment of the second data collection, respondents are still in high school, so they do not have an independent social position yet. As such, we can be quite

confident that any differences we might observe are not due yet to the social sorting mechanism of education.

## **Data and Methods**

There are not all that much studies available that offer the panel design data that are best equipped to study the long term cognitive effects of civic education. The Belgian Political Panel Study (BPPS), however, offers information on political attitudes and behaviors among late adolescents that were interviewed twice, once at the age of 16, and once at the age of 18. In the first wave of the study, 112 schools in Belgium were randomly sampled, and in these secondary schools, the 4<sup>th</sup> grade (10<sup>th</sup> grade in the US system) was sampled by a researcher, visiting during class hours. In total, this resulted in data on 6,330 adolescents. A response analysis showed that respondents were representative for the Belgian (both Dutch as French language group) population of 16-year olds, with regard to region, gender and education system. Two years later, the same schools were visited and this time the 6<sup>th</sup> grade (12<sup>th</sup> grade in the US system) was sampled. In total 2,988 respondents were reached again in that manner. Although this response rate might not seem very impressive, it has to be remembered that this only applies to respondents who stayed in the same school, and progressed as planned toward the 6<sup>th</sup> grade. For those who remained in their schools and classes, response was almost universal. Additionally, efforts were done to contact the adolescents who were no longer at the same school. Thus resulted in another 1,247 respondents that were contacted by mail for the second wave. While the response analysis showed that these additional respondents did not differ in a significant manner from the original panel sample (thus bringing the total response rate for the second wave to 66.9 per cent), for this specific analysis these ‘postal’ respondents were not included in the analysis. The reason is that we can expect strong differences with regard to political knowledge measurements, depending on the survey method. For those who remained in the same school, political knowledge was questioned under rather strict conditions, with a researcher being present in the classroom during both measurements. The researcher made sure that respondents did not look for additional information, or did not talk with one another. As such we can be quite confident that this resulted in a valid measurement of political knowledge among these respondents. Such a control was of course not possible for those who participated by mail in the second wave of the panel study, and previous experiences have shown that in these conditions it is very

tempting for respondents to search for additional information (see e.g., Hooghe et al. 2010). Therefore, and since the postal survey had to be very brief to ensure sufficiently high response rates, political knowledge was not tested for this second group of panel respondents. The analysis, therefore, remains limited to those respondents who were sampled in the same school during both waves of the BPPS survey (n= 2,988).

Given the concern about valid measurements, we will first assess whether the variables used in the analysis have been measured in a valid and reliable manner, before moving on to the final regression model. There we will use civic education experiences, as measured during wave 1, in order to explain the political knowledge level during wave 2, two years later on.

## **Measurements**

The first, obvious variable is political knowledge. Knowledge levels were measured both during the first and the second wave, by providing a number of multiple choice questions. In order to increase the willingness to participate in the survey, the battery was limited to only four questions on political knowledge. It has to be acknowledged, therefore, that we can rely only on a limited measurement of political knowledge, and it would have been impossible to include a wide comprehensive political knowledge test, without endangering the willingness of respondents to take part in the study. Numerous potential elements of political knowledge, therefore, could not be included in the test. It has to be noted however, that the test actually performed well, with a Cronbach's  $\alpha$  of .57 among the respondents in 2006, and a Cronbach's  $\alpha$  of .60 during the second wave, which is quite high for this kind of cognitive test. These test characteristics make it clear that, despite the fact that we had access to only a limited measurement of the phenomenon of political knowledge, the test scale at least can be considered to be internally valid. While it would have been preferable to have a longer and more comprehensive measurement of political knowledge, in practice this would be impossible in such a survey design. It has to be noted, furthermore, that previous studies of political knowledge also rely on quite limited measurement scales, while the internal coherence of the scale in this study was clearly higher than in these previous studies (Hooghe, Quintelier & Reeskens, 2007; Sturgis, Allum & Smith, 2008).



**Table 1. Political Knowledge during wave 1**

|                   | Correct | Wrong | Don't Know | Missing | n    |
|-------------------|---------|-------|------------|---------|------|
| All respondents   |         |       |            |         |      |
| Europ. Commission | 17.7    | 20.0  | 60.5       | 1.7     | 2988 |
| Belg. Parliament  | 28.8    | 14.6  | 54.3       | 2.3     | 2989 |
| Minister Justice  | 24.7    | 13.7  | 59.9       | 1.7     | 2988 |
| Prime Minister    | 47.4    | 16.8  | 34.1       | 1.7     | 2989 |
| Girls             |         |       |            |         |      |
| Europ. Commission | 10.7    | 18.7  | 68.7       | 1.8     | 1507 |
| Belg. Parliament  | 27.2    | 12.4  | 57.9       | 2.5     | 1508 |
| Minister Justice  | 21.6    | 11.5  | 64.9       | 1.9     | 1507 |
| Prime Minister    | 41.0    | 16.9  | 40.2       | 1.9     | 1508 |
| Boys              |         |       |            |         |      |
| Europ. Commission | 24.7    | 21.3  | 52.5       | 1.6     | 1451 |
| Belg. Parliament  | 30.5    | 16.5  | 51.0       | 2.0     | 1451 |
| Minister Justice  | 27.8    | 15.9  | 54.9       | 1.4     | 1451 |
| Prime Minister    | 53.9    | 16.9  | 27.8       | 1.4     | 1451 |

Distribution of answers on multiple choice items for political knowledge, BPPS, wave 1. Respondents were offered four answering options, and a don't know option.

More specifically, respondents were asked about the party of the Prime Minister, the composition of the Belgian parliament (Chamber and Senate), the name of the Minister of Justice, and the name of the President of the European Commission. Answering patterns are summarized in Table 1. It has to be noted that the political knowledge test was maybe too strict in 2006. Respondents obtained an average score of 1.19 (of a maximum of 4), with boys scoring higher (1.37) than girls (1.01). It has to be noted in this regard that we did follow the advice by Campbell and Wolbrecht (2006) that women more easily identify with female politicians, and that therefore it is important to include female role models too in questions on political knowledge. This did not have an effect, however. The question on the name of the female Minister of Justice was answered correctly by 21.6 per cent of female respondents, and by 27.8 per cent of all male respondents. In this case, it is clear that female adolescents apparently do not remember the name of the female minister more easily than male adolescents do. Despite this precaution being taken in the questionnaire, we can observe a rather strong difference between the scores of male and female respondents.

**Table 2. Political Knowledge during wave 2**

|                   | Correct | Wrong | Don't Know | Missing | n    |
|-------------------|---------|-------|------------|---------|------|
| All respondents   |         |       |            |         |      |
| Europ. Commission | 33.1    | 17.0  | 48.2       | 1.6     | 2987 |
| Belg. Parliament  | 51.7    | 14.6  | 32.3       | 1.4     | 2988 |
| Socialist Party   | 20.5    | 30.8  | 47.3       | 1.4     | 2988 |
| Minister Finance  | 60.7    | 11.0  | 27.2       | 1.0     | 2988 |
| Girls             |         |       |            |         |      |
| Europ. Commission | 25.9    | 16.9  | 55.3       | 1.8     | 1507 |
| Belg. Parliament  | 53.3    | 13.8  | 31.7       | 1.2     | 1507 |
| Socialist Party   | 18.2    | 29.2  | 51.2       | 1.5     | 1507 |
| Minister Finance  | 58.7    | 10.7  | 29.4       | 1.2     | 1507 |
| Boys              |         |       |            |         |      |
| Europ. Commission | 40.3    | 17.4  | 40.8       | 1.5     | 1450 |
| Belg. Parliament  | 49.7    | 13.7  | 33.1       | 1.6     | 1451 |
| Socialist Party   | 22.9    | 32.4  | 43.3       | 1.3     | 1451 |
| Minister Finance  | 62.8    | 11.3  | 25.0       | 0.9     | 1451 |

Distribution of answers on multiple choice items for political knowledge, BPPS, wave 2. Respondents were offered four answering options, and a don't know option.

During the second wave, we opted for a double strategy. On the one hand two questions from the first wave were repeated. Recall of the name of the president of the European commission rose from 18 in the first wave to 33 per cent in the second wave. The question about the Belgian Parliament rose from 29 to 52 per cent correct answers. For the two new questions in the second wave, we also have strong variance, with 61 per cent of respondents answering correctly the name of the Minister of Finance, and 21 per cent answering correctly the name of the president of the Socialist Party. Average scores during wave 2 were also clearly higher with a score of 1.66 on a maximum of 4 (women: 1.56; men: 1.76). Just like in the first wave, the 'female role model' thesis was not confirmed in the second wave. The name of the President of the Socialist Party (Ms. Caroline Gennez), was answered correctly by 22.9 per cent of the male respondents, and by 18.2 per cent of the female respondents. Furthermore, it has to be noticed that the four items of this battery performed quite well. During the first wave, the four items correlated between .624 and .700 with the overall result; and during the second wave these correlations ranged between .610 and .714. As already mentioned the Cronbach's  $\alpha$  of the scale rose from .57 to .60, which can be considered as more than satisfactory for this kind of knowledge tests. Correlation between the first and second wave scores was .507.

The main independent variable in the analysis are the experiences with civic education (for full question wording and descriptives of the variables, see Appendix 1). In line with the

literature, a number of distinct forms of civic education can be distinguished. The first and most straightforward one consists of lessons about politics and the political system. This kind of 'traditional' civic education explicitly aims to have cognitive outcomes, as it is designed to raise the knowledge level of pupils (Kahne, Chi & Middaugh, 2006). Other authors, however, have made the claim that the classroom climate has a much more important impact on the formation of democratic value patterns (Torney-Purta, 2001). The main idea here is related to Dewey's vision on democratic schools: the school environment itself should be seen as a democratic living environment if its goal is to prepare pupils to play a meaningful role in a democratic society. Third, forms of community service have been introduced in order to provide a 'real world' dimension in civic education, and some evaluation studies have shown that this kind of service learning indeed can have enduring effects (Youniss & Yates, 1997).

The questionnaire of the BPPS included sufficient information to operationalise these three dimension of civic education. For classes about politics, respondents were asked whether they had received lessons about current political events, elections, Parliament, federalism (Belgium is a federal political system) and the functioning of the European Union and the United Nations. These six items can be summarized in one sumscale, since they correlate very strongly (Cronbach's alpha .98 during the first wave). For classroom climate, we used a three-item sum scale with items taken from the international Civic Education survey, conducted by IEA in 1999. The most characteristic item of the scale is: "Pupils are encouraged to make up their own mind about things." Further, we asked respondents if at school they had a say on several issues, like school discipline or the teaching agenda. Respondents' answers on these questions were recoded as dichotomous variables (0 = no say, 1 = a say) and as they proved to be a solid scale, they were summed. This sum-scale is used to measure the degree of democratic decision making at school. Besides formal civic education and an open classroom climate, we also included three variables that measure the presence of active learning strategies at school. First, we included whether and to what degree pupils had cooperated in group projects in class. This is a single item with scores ranging from 0 (never) to 4 (often). Second, we took into account whether and how often pupils had been required to do voluntary work as a school assignment (from never to more than twenty hours). The results show that this method is not all that widespread, with 16 per cent of all respondents indicating that they had experienced community service at school. Thirdly, we added a sum-scale variable for 'visiting parliament or the city hall' and 'a politician or important public figure came to speak in class' in the analysis. As an individual characteristic of pupils, we also controlled for membership of the school council<sup>1</sup>.

Self-evidently, various control variables had to be included, as earlier studies have shown that they have an important impact on political knowledge levels. These are: gender, language, track, educational goal, education level of mother and father, talking about politics with one's parents, the number of books at home, talking about politics with one's friends, and watching news on television. All these control variables were measured during the first wave of the study.

Given the way the data were collected, multilevel methods of analysis are called for, as data on pupils are nested within classes. Students in the same class share some characteristics with students sampled in the same class, and not taking this structural element of the data into account would lead to unreliable estimates and would cause wrong interpretations about the effects of different variables (Hox, 2010). A multilevel approach is thus necessary to control for the fact that observations are related. We distinguish between an individual level (the pupils) and a class-level. Analyses were conducted using the statistical program HLM.

Although the variables for the civic education strategies were measured at the individual level, we analyze them at the class level. Therefore we aggregate pupils' scores on these items to the class level. Pupils' are expected to remember and report their civic education experiences differently depending on their level of interest in politics. Therefore, we aggregate their scores and in order to avoid this type of measurement error. All independent variables were measured during wave 1, the dependent variable (political knowledge) was measured during wave 2, two years later on.

## **Results**

The results of the analysis are presented in Table 3, and first of all it can be observed that there is an intra-class correlation of 26 per cent at the classroom level, and after including all variables this intra-class correlation is reduced to 12.5 per cent. This by itself demonstrates that it is meaningful to study the prevalence of political knowledge in a school context and it also shows that a very substantial part of this variation can be explained by the variables included in the model. With regard to the control variables, a number of traditional findings in

the literature are confirmed. Following news in the media is associated with high levels of political knowledge, and the same goes for talking about politics with friends and parents. Adolescents living in a politicized environment (whether this is in the media, at home or among peers) clearly know more about politics. Second, the results show that adolescents with higher educational goals know more about politics, while the education of the parents or the number of books at home have no significant impact on political knowledge. It can furthermore be observed that boys on average have higher levels of political knowledge, while the knowledge level is also higher among French-speaking respondents than among Dutch-speaking respondents.

Given our research question, however, our main theoretical interest lies with the effect of classroom variables on political knowledge. The impact of classes about politics remains limited, but is significant at the .05 level. Experiences with group projects too, have a strong positive effect on the level of political knowledge. Further, we see that an open classroom climate has a significant positive effect on political knowledge, while, somewhat surprisingly, the effect of joint decision making at school is negative. All the other forms of civic education experiences do not have a significant impact on the level of political knowledge.

In Model III, we develop a much stricter test by including the initial level of political knowledge in the first wave of the study as a control variable. Almost self evidently, the impact of political knowledge in 2006 is extremely strong, indicating that there is a strong continuity in the two measurements (the zero order correlation between the political knowledge levels in 2006 and 2008 is .51). While including this control variable reduces the impact of all other variables, it has to be noted that significance levels largely remain the same, with strong effects of talking about politics, language and gender. Further, even when controlling for the level of political knowledge in 2006, pupils with a higher educational goal know significantly more about politics. The effect of group projects, too, remains the same as in the first model, demonstrating quite clearly that experiences with group projects at school contribute to the development of political knowledge at this age. The effect of classes about politics is rendered non-significant, and so is the effect of joint decision making. With the strict test, an open classroom climate does still have a significant and positive effect on political knowledge. The conclusion to be drawn from this strict test is that group projects and an open classroom climate contribute significantly to the development of political knowledge.

It still remains to be investigated however, whether the effects of different forms of civic education are uniform across groups of pupils. To detect the occurrence of these interaction effects, we developed a further Model IV. In this model we test whether the effect of civic education differs depending on students' initial level of political knowledge. First, we observe a positive interaction effect between group projects and the initial level of political knowledge in wave 1 of the panel survey. This indicates that respondents who already have high levels of political knowledge, benefit more strongly from group projects in class. Second, we observe a negative relation between the initial level of political knowledge and joint decision making. Those with high initial levels of political knowledge, apparently gain less in political knowledge in schools where the pupils are very strongly involved in decision making. For all other forms of civic education, we do not find any significant interaction effect, implying that their effect (or lack of effect) is not dependent on the initial level of political knowledge.

**Table 3: The effect of civic education on political knowledge (all variables)**

|   | <b>Model I</b>    | <b>Model II</b>    | <b>Model III</b>   | <b>Model IV</b>    |
|---|-------------------|--------------------|--------------------|--------------------|
| Intercept   | 1.572 (0.045) *** | -3.821 (0.530) *** | -2.601 (0.474) *** | -2.521 (0.558) *** |
| Language (0= Dutch, 1= French)                    |                   | 0.577 (0.112) ***  | 0.484 (0.100) ***  | 0.500 (0.101) ***  |
| Gender (0= female, 1= male)                       |                   | 0.462 (0.050) ***  | 0.235 (0.048) ***  | 0.225 (0.048) ***  |
| Education level father                            |                   | 0.031 (0.027) ns   | 0.044 (0.026) °    | 0.042 (0.026) ns   |
| Education level mother                            |                   | -0.037 (0.030) ns  | -0.027 (0.028) ns  | -0.026 (0.028) ns  |
| Educational goal respondent                       |                   | 0.257 (0.040) ***  | 0.207 (0.037) ***  | 0.211 (0.038) ***  |
| Books at home                                     |                   | -0.004 (0.016) ns  | -0.005 (0.015) ns  | -0.003 (0.015) ns  |
| Parents talking about politics                    |                   | 0.186 (0.038) ***  | 0.114 (0.036) **   | 0.112 (0.036) **   |
| Talking about politics with friends               |                   | 0.240 (0.041) ***  | 0.172 (0.039) ***  | 0.172 (0.039) ***  |
| Following news through the media                  |                   | 0.207 (0.022) ***  | 0.123 (0.021) ***  | 0.121 (0.021) ***  |
| Member of School council                          |                   | 0.074 (0.090) ns   | 0.051 (0.085) ns   | 0.043 (0.085) ns   |
| Political Knowledge 2006                          |                   |                    | 0.399 (0.020) ***  | 0.361 (0.281) ns   |
| <b>Class Level Variables</b>                      |                   |                    |                    |                    |
| Classes about politics                            |                   | 0.334 (0.144) *    | 0.137 (0.127) ns   | 0.195 (0.160) ns   |
| Group projects                                    |                   | 0.581 (0.103) ***  | 0.451 (0.092) ***  | 0.308 (0.110) **   |
| Volunteering                                      |                   | -0.159 (0.188) ns  | -0.117 (0.166) ns  | 0.072 (0.197) ns   |
| Political visits                                  |                   | -0.241 (0.226) ns  | -0.171 (0.200) ns  | -0.119 (0.250) ns  |
| Joint decision making                             |                   | -0.138 (0.058) *   | -0.066 (0.052) ns  | 0.016 (0.061) ns   |
| Open classroom climate                            |                   | 0.413 (0.170) *    | 0.278 (0.151) °    | 0.264 (0.183) ns   |
| <b>Interaction Effects</b>                        |                   |                    |                    |                    |
| Knowledge 2006 * Classes about politics           |                   |                    |                    | -0.060 (0.079) ns  |
| Knowledge 2006 * Group projects                   |                   |                    |                    | 0.110 (0.049) *    |
| Knowledge 2006 * Volunteering                     |                   |                    |                    | -0.139 (0.086) ns  |
| Knowledge 2006 * Political visits                 |                   |                    |                    | -0.028 (0.124) ns  |
| Knowledge 2006 * Joint decision making            |                   |                    |                    | -0.090 (0.030) **  |
| Knowledge 2006 * Open classroom climate           |                   |                    |                    | 0.020 (0.096) ns   |
| $\sigma^2_e$                                      | 1.186             | 1.042              | 0.901              | 0.897              |
| $\sigma^2_{u0}$                                   | 0.419             | 0.185              | 0.127              | 0.135              |
| $\sigma^2_{u1}(\text{political knowledge } 2006)$ |                   |                    |                    | 0.000              |
| ICC Class Group                                   | 0.261             | 0.151              | 0.124              | 0.131              |
| N   | 2738              | 2288               | 2223               | 2223               |

Source: BPPS 2006-2008. Standard errors are in parentheses. Dependent variable is Political Knowledge in 2008 (from 0 to 4). Significance: °:  $\leq 0.1$ ; \*:  $\leq 0.05$ ; \*\*:  $\leq 0.01$ ; \*\*\*:  $\leq 0.00$

## Discussion

In recent years, it has become customary to stress the importance of non-cognitive outcomes of civic education. By itself, there are a number of very good and valid reasons to take this option, and the aim of the current analysis certainly was not to question this education focus. Recent empirical evidence, however, has demonstrated repeatedly that political knowledge does remain an important resource for any form of enlightened and meaningful political participation. Given these research results, in this study our aim was to investigate whether civic education is indeed successful in meeting cognitive goals with regard to the development of political knowledge.

It has to be stressed in this regard that we opted for a very conservative test. By using the level of political knowledge two years after the initial experience with civic education, it can already be assumed that most of the short-term consequences will have been washed out, and no longer can be detected given the longitudinal design of this study. Nevertheless, we still managed to find some conclusive evidence with regard to the effects of civic education. First of all, however, it has to be noted that the effect of school experiences does remain rather limited. The strongest effects we found all relate to living in a politicized environment, and it does not seem to matter all that much whether this refers to friends, parents or the media. Adolescents who hear a lot about politics, obviously also succeed in retaining some of that political information. While the effect of the school was not overwhelming, it clearly was present and significant. Just taking classes about politics, however, did not lead to the main effect in this study. Experiences with group projects in class, on the other hand, did lead to a strong and significant impact on political knowledge. What is more, even if we control for the initial level of political knowledge, this teaching form still has a strong impact. The interaction effect demonstrates that those who already know more about politics to start with, even learn more from group projects than the other pupils.

Within the literature on education outcomes, it is not self-evident why especially group projects would have such a strong and significant effect. First, it has to be remembered that this might be an idiosyncratic element for the Belgian educational systems. Since both the French language as the Dutch language community have opted for a cross-curricular approach to civic education, most of the cognitive transfer with regard to politics does not take place in ordinary, day to day classes. Rather, schools will develop projects that can be concentrated



during a more limited time period within the academic year, and that most likely will involve some form of group work. If that assumption would be correct, it can be assumed that we would find the same effects in other education systems that rely on a cross-curricular approach to civic education. A second possible explanation might be that, in general, group projects are simply more effective than traditional individual class-based learning strategies. There is indeed a literature claiming that cooperative learning can be considered as highly effective (Slavin, 1994). It would be a straightforward assumption to argue that especially with regard to civic education, cooperative learning strategies will have an effect as the group interaction that is central to this teaching method is closely associated with the democratic ethos that is claimed to be essential for the stability of a democratic civic culture. Third, and on a more cautious note, it has to be remembered that not all groups of pupils are exposed to cooperative learning strategies in the same manner. We can demonstrate this most clearly for the Dutch language community in the country, where the distinction between educational tracks tends to be stricter. Among pupils in the most highly ranked track (general education), 98 % of all respondents report some experience with group projects. In the education tracks that often are considered to be less academic, this is clearly lower. In technical schools this was 87 per cent, and in vocational schools 79 per cent. Apparently, schools are more inclined to develop group projects and cooperative teaching in schools where they assume high academic norms can be met.

A final caveat to be introduced is that in the analysis, we relied on aggregate measurements. The reason to take this step is that we know there is a substantial amount of recall error among pupils, who might no longer know correctly whether they had experienced forms of civic education or not. By aggregating this information to the class level, we can be more certain that this information actually reflects reality. Recall error indeed proved to be quite problematic in this respect. In an additional test, we performed all the analyses with only information included on the first level (see Appendix 2). In this case, however, none of the self-reported experiences with civic education proved to have a significant effect. It also has to be noted that we had to rely on a rather limited measurement of political knowledge, with only four items included in the test. In future research, it would therefore be advisable to test whether longer and more comprehensive political knowledge scales would lead to the same effect.

A rather counter-intuitive finding from the current analysis is that joint decision-making at school has a negative impact on political knowledge, especially for those with initially high levels of knowledge. This finding runs counter to the expectation that democratic schools in

general will function more effectively. It has to be remembered, however, that in the current questionnaire, joint decision making involved matters that are quite substantial to the day-to-day functioning of a school, including school discipline, teachers and exam regulations. This intensive involvement of the student body in governing the school might have as a consequence that cognitive goals of education receive less emphasis, while non-cognitive goals are more strongly developed. This, however, is something that needs to be investigated in future research. (xxx cfr paper Martens and Gainous op Apsa)

Despite these caveats, basically the findings from the present study reinforce the findings from the Niemi and Junn (1998) volume: schooling practices do have a significant effect on the level of political knowledge among pupils. We can build on previous findings by our research design, that was based on longitudinal data instead of cross-sectional observations, and that did allow us to control for initial levels of political knowledge. As such, we can argue that our analysis adds some insights to these earlier findings. Our results in any case suggest that the task of pursuing cognitive outcomes of civic education should not be neglected by educational systems. However, the main challenge for educational systems seems to be to motivate pupils to gain knowledge about politics. Classical lessons about political institutions obviously are not the most effective manner to install this motivation. In line with the literature on cooperative learning, however, it can be observed that group projects seem to be highly effective in this respect.

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## Appendix 1. Variables included in the analysis

|  | Mean | Standard Deviation | Frequencies | Cronbach's $\alpha$ (if item deleted) |
|--|------|--------------------|-------------|---------------------------------------|
| Language (0 = Dutch, 1 = French)   | 0.36 | 0.48               |             |                                       |
| Gender (0 = female, 1 = male)  | 0.49 | 0.50               |             |                                       |
| Educational goal (1 = no secondary degree to 4 = university degree)  | 3.19 | 0.76               |             |                                       |
| Level of education mother (1 = lower secondary education to 4 = university degree)   | 2.38 | 0.88               |             |                                       |
| Level of education father (1 = lower secondary education to 4 = university degree)   | 2.39 | 1.00               |             |                                       |
| Number of books at home (1 = none to 7 = over 500)   | 4.07 | 1.61               |             |                                       |
| Following news in the media (1 = never to 5 = daily)   | 3.69 | 1.08               |             |                                       |
| Parents discuss about politics (1 = to 4 =)  | 2.15 | 0.68               |             |                                       |
| Discussing about politics with friends (1 = never to 4 = all the time)   | 1.59 | 0.61               |             |                                       |
| School council (0 = no member, 1 = member)   | 0.06 | 0.23               | 6.4%        |                                       |
| Classes about politics (1 = never to 4 = often)  |      |                    |             |                                       |
| 1. The way parliament works  | 1.53 | 0.69               |             | .81                                   |
| 2. The United Nations  | 1.57 | 0.71               |             | .81                                   |
| 3. The European Union  | 1.82 | 0.80               |             | .80                                   |
| 4. Federalism  | 1.41 | 0.65               |             | .81                                   |
| 5. Elections   | 1.74 | 0.73               |             | .81                                   |
| 6. Current political events  | 2.15 | 0.87               |             | .82                                   |
| Sum-scale classes about politics (1 to 4)  | 1.70 | 0.55               |             | <b>.84</b>                            |
| Group projects (1 = never to 4 = often)  | 2.32 | 0.79               |             |                                       |
| Volunteering (0 = never to 3 = more than twenty hours)   | 0.19 | 0.48               |             |                                       |
| Visits   |      |                    |             |                                       |
| 1. Visited parliament or the city hall (0 = no; 1 = yes)   | 0.09 | 0.28               | 8.8%        |                                       |
| 2. A politician or important public figure in class (0 = no; 1 = yes)  | 0.11 | 0.31               | 10.8%       |                                       |
| Sum-scale dummies (0 to 2)   | 0.20 | 0.44               |             |                                       |
| Joint Decision Making (A say in ... 0 = no; 1 = yes)   |      |                    |             |                                       |
| 1. Problems at school  | 0.41 | 0.49               |             | 0.67                                  |
| 2. Activities  | 0.39 | 0.49               |             | 0.65                                  |
| 3. Spread of homework and exams  | 0.28 | 0.45               |             | 0.64                                  |
| 4. Judging teachers  | 0.26 | 0.44               |             | 0.62                                  |
| 5. Punishments   | 0.15 | 0.36               |             | 0.63                                  |
| 6. Rules   | 0.23 | 0.42               |             | 0.63                                  |
| Sum-scale (0 to 6)   | 1.70 | 1.65               |             | <b>0.68</b>                           |
| Open Class Room Climate (1 = totally disagree to 4 = totally agree)  |      |                    |             |                                       |
| 1. Teachers present several sides of an issue when explaining it in class  | 2.72 | 0.63               |             | .56                                   |
| 2. Students are encouraged to make up their own minds about issues   | 2.73 | 0.75               |             | .47                                   |
| 3. Students feel free to express opinions in class even when their opinions are different from most of the other students. | 2.71 | 0.75               |             | .47                                   |
| Sum-scale (1 to 4)   | 2.72 | 0.53               |             | <b>.61</b>                            |

## Appendix 2. Analyses with all variables included at the individual level

|                                     | Model I           | Model II           | Model III          |
|-------------------------------------|-------------------|--------------------|--------------------|
| Intercept                           | 1.572 (0.045) *** | -1.391 (0.220) *** | -0.888 (0.205) *** |
| Language (0 = Dutch, 1 = French)    |                   | 0.174 (0.089) **   | 0.223 (0.078) **   |
| Gender (0 = female, 1 = male)       |                   | 0.415 (0.053) ***  | 0.190 (0.050) ***  |
| Education level father              |                   | 0.036 (0.029) ns   | 0.047 (0.027) °    |
| Education level mother              |                   | -0.035 (0.032) ns  | -0.029 (0.030) ns  |
| Educational goal respondent         |                   | 0.318 (0.042) ***  | 0.259 (0.039) ***  |
| Books at home                       |                   | -0.005 (0.018) ns  | -0.007 (0.017) ns  |
| Parents talking about politics      |                   | 0.228 (0.041) ***  | 0.146 (0.038) ***  |
| Talking about politics with friends |                   | 0.226 (0.044) ***  | 0.161 (0.041) ***  |
| Following news through the media    |                   | 0.231 (0.024) ***  | 0.138 (0.023) ***  |
| Member of School council            |                   | 0.108 (0.094) ns   | 0.078 (0.088) ns   |
| Classes about politics              |                   | 0.065 (0.049) ns   | 0.018 (0.046) ns   |
| Group projects                      |                   | 0.049 (0.035) ns   | 0.046 (0.033) ns   |
| Volunteering                        |                   | -0.010 (0.053) ns  | -0.003 (0.050) ns  |
| Political visits                    |                   | -0.059 (0.058) ns  | -0.055 (0.054) ns  |
| Joint decision making               |                   | -0.026 (0.016) ns  | -0.015 (0.015) ns  |
| Open classroom climate              |                   | -0.032 (0.048) ns  | -0.048 (0.045) ns  |
| Political Knowledge 2006            |                   |                    | 0.405 (0.021) ***  |
| $\sigma^2_e$                        | 1.186             | 1.062              | 0.921              |
| $\sigma^2_{u0}$                     | 0.419             | 0.231              | 0.149              |
| ICC Class Group                     | 0.261             | 0.179              | 0.139              |
| N                                   | 2738              | 2054               | 2005               |

Source: BPPS 2006-2008. Dependent variable: Political Knowledge in wave 2. All independent variables measured in 2006 and entered at the individual level. Sign.: \*\*\*:  $p < .001$ ; \*\*:  $p < .01$ ; \*:  $p < .05$ .

### Endnote

<sup>1</sup>. The presence of the school council could not be included as a school level variable, as a 2004 Decree of the Flemish Community requires the presence of a school council at every school. As such, there is no variance in this regard at the school level, as by now all schools comply with this legal obligation.