Role of school climate and personality in the development of Czech adolescents' political

self-efficacy

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Abstract

This study examined the effects of school climate (open classroom and positive student relationships) and personality dispositions (shyness and need for cognition) on adolescents' political self-efficacy. Data were collected in 2014 from 1,954 Czech ninth and tenth graders (mean age=15.60). A multilevel analysis showed that school-level political self-efficacy predicted self-efficacy for local politics. However, schools and classrooms were rather homogeneous in terms of students' mean political self-efficacy and also students' self-reported acquisition of civic skills at school. Hence, school characteristics had only limited associations with adolescents' political self-efficacy. At the same time, students' political efficacy had a considerable association with lower shyness and higher need for cognition. These results suggest that the development of political efficacy at school goes beyond simple general influences of school environment and individual differences between students must be considered.

Keywords: political self-efficacy; open classroom climate; shyness; need for cognition; adolescence.

Introduction

Political self-efficacy, a personal belief in the ability to achieve desired political outcomes, is an important precursor to one's political involvement. The past decades of research have produced a great amount of evidence of its positive effects on political participation, and, consequently, researchers began to focus also on its origins (see Beaumont, 2010 for a review). Consistent with the ideas that in youth people are the most open to political learning and their political beliefs remain relatively stable for the rest of their lives (Sears & Levy, 2003), adolescence typically has been considered a crucial period for the development of political efficacy (Beaumont, 2010; Flanagan & Sherrod, 1998). Prominent focus has been given to the role of schools because school experiences usually represent adolescents' first contact with the public realm and serve as a potential model for learning how the broader society works (Amnå & Zetterberg, 2010; Torney-Purta, 2002). This line of research has brought valuable knowledge that helps to understand the role of school in political socialization. Nevertheless, political behavior and development are also substantially affected by personality dispositions (Mondak, 2010). From this perspective, there is still a lack of studies showing that adolescents' political self-efficacy not only is shaped by contextual effects (i.e. school) but it is also related to stable individual differences between students.

Our study aims to provide a more complex insight into the development of political self-efficacy. We partially follow the contextual approach, which has been pursued in prior research: we examine whether school *context*, namely an open classroom climate and positive relationships with classmates, are associated with adolescents' greater sense of political self-efficacy. In addition, we go beyond previous studies by also taking into account adolescents' personality *dispositions*. We believe that adolescents' political self-efficacy also reflects adolescents' more general cognitive and emotional individual dispositions, such as shyness or

need for cognition (i.e. one's tendency to derive enjoyment from deep thinking or deliberation). In summary, the main aim of this study is to assess, in one comprehensive model, how both contextual and dispositional factors contribute to the development of political self-efficacy in adolescents.

Developing political self-efficacy at school

The literature on political behavior often distinguishes between the self-perception of one's own political capacity, called internal political efficacy, and the perception that the political system is open to change, called external political efficacy. This study focuses on the internal aspect of political efficacy, which also can be understood as a specific self-efficacy belief expressed in the domain of politics (Beaumont, 2010). Thus, political self-efficacy (or internal political efficacy) represents a "*personal belief regarding the ability to achieve desired results in the political domain through personal engagement and an efficient use of one's own capacities and resources*" (Caprara, Vecchione, Capanna, & Mebane, 2009; p. 1002).

People construct self-efficacy beliefs by selecting, interpreting, and integrating relevant information about their personal capabilities (Bandura, 1997). Hence, political-self efficacy is constructed from people's judgments about their ability to operate effectively in the world of politics, e.g., to negotiate with public officials or to organize political actions. At the same time, it seems to be appropriate to understand political self-efficacy as composed of several particularized efficacy beliefs pertaining to different political domains and levels (Bandura, 1997). We assume that, for adolescents, political self-efficacy for local politics is particularly important because this political level is more accessible to adolescents and closer to their everyday lives than national or global politics (Cammaerts, Bruter, Banaji, Harrison, & Anstead, 2016; Youniss et al., 2002).

From this perspective, schools can substantially influence adolescents' political self-efficacy by providing them with opportunities to develop and practice skills that can be used effectively in the political domain (Beaumont, 2010; 2011; Torney-Purta, 2002). Kirlin's (2003) review shows that such *civic skills* involve four major categories: organization (e.g., organizing collective activities), communication (e.g., making speeches or writing letters), collective decision-making (e.g., building consensus), and critical thinking (e.g., formulating positions on public issues). All of these skills could be developed and practiced in the classroom, and, through their acquisition, students would gain confidence in their capacity for political action, i.e. political self-efficacy (Beaumont, 2011; Pasek, Feldman, Romer, & Jamieson, 2008).

Furthermore, school might provide adolescents with opportunities for mastery experiences, which are claimed to be the most influential sources of political self-efficacy (Bandura, 1997; Beaumont, 2010). For instance, students' negotiations with teachers on issues related to school functioning can be understood as a form of community-level political participation. These experiences might serve as a basis for students' beliefs in their ability to achieve desired outcomes in schools, which we label as school political self-efficacy. In turn, it is possible that increased school political self-efficacy enhances self-efficacy related to political issues outside the school.

Our conceptualization of school political self-efficacy partially relates to the concept of citizenship self-efficacy, used by the IEA International Civic and Citizenship Education Study (Schulz, Ainley, Fraillon, Kerr, & Losito, 2010) and research papers analyzing data from this study (e.g., Manganelli, Lucidi, & Alivernini, 2015). Citizenship self-efficacy is defined as students' beliefs that they are able to perform different activities related to civic participation at and outside the school (e.g., to organize a group of students in order to achieve changes at school, or to write a letter to newspaper on a current issue). From this perspective,

school political self-efficacy is a more specific belief capturing the school aspect of citizenship self-efficacy in contrast to its non-school aspects that are captured, for instance, by local political self-efficacy.

Numerous authors assume that both acquisition of civic skills and participation in mastery experiences are most likely to occur in a specific school environment commonly known as an open classroom climate. Although the definitions of an open classroom differs slightly across studies, the usual core elements include the possibility to engage in respectful debates and to express opinions on public issues. Previous studies have shown the positive relation of open classroom climate not only to students' political self-efficacy (Godfrey & Grayman, 2014; Manganelli et al., 2015; Perliger, Canetti-Nisim, & Pedahzur, 2006) and confidence in school participation (Godfrey & Grayman, 2014; Torney-Purta, Barber, & Richardson, 2004), but also to other related constructs, such as political trust (Claes, Hooghe, & Marien, 2012; Dassonneville, Quintelier, Hooghe, & Claes, 2012), political knowledge (Campbell, 2008; Hoskins, Janmaat, & Villalba, 2012), or pro-participatory attitudes and actual political participation (Campbell, 2008; Hooghe & Dassonneville, 2013; Hoskins et al., 2012; Manganelli et al., 2015; Perliger et al., 2006; Quintelier & Hooghe, 2013).

In addition, the development of political self-efficacy at school might be influenced by the quality of relationships existing within the classroom. Although this dimension of classroom climate typically has not been considered in studies of political self-efficacy (Sohl & Arensmeier, 2015 being an exception), peers play a crucial role in adolescents' development (Brown, 2004). More specifically, relationships with classmates can affect adolescents' self-efficacy beliefs. It has been shown that students who perceived they were valued and respected by other classmates reported greater self-efficacy (Nelson & DeBacker, 2008), and thus it is possible that a similar process occurs also in relation to political self-efficacy. Students' political self-efficacy might be stimulated via two processes. First, positive

relationships among classmates can facilitate students' engagement in classroom activities, such as discussions or group projects, enhancing the formation of civic skills. The resulting sense of accomplishment associated with practicing civic skills might lead to the transformation of these experiences into students' efficacy beliefs (Bandura, 1997). Second, students with good relationships can get positive feedback on their accomplishments, which, in turn, positively facilitates the development of their efficacy beliefs (Schunk & Meece, 2006).

Limitations of previous research on classroom effects

Previous studies on the positive effects of classroom climate on students' political outcomes have at least two limitations. First, as elaborated by Godfrey and Grayman (2014), researchers (with a few exceptions) usually operationalized classroom climate via students' individual perceptions, which may not be accurate representations of the classroom as a whole. Such an approach provides only limited evidence of the directionality: whether open classroom climate encourages certain beliefs in students (e.g., political self-efficacy) or whether students with certain beliefs simply perceive their classroom as more open. As a result, merely using students' perceptions to understand classroom climate might lead to an overestimation of classroom effects.

To mitigate this limitation, several recent studies used a multilevel approach and understood classroom climate as a composite of students' perceptions. However, their results were rather mixed. The positive effects of open classroom climate on political (or citizenship) self-efficacy were shown in the United States (Godfrey & Grayman, 2014) and Italy (Manganelli et al., 2015). Open classroom also predicted a broader construct referred to as participatory attitude (political self-efficacy was one of its components) in five European countries (Hoskins et al., 2012). Nevertheless, overall differences in students' mean political self-efficacy between classrooms and schools were rather low in terms of intra-class

correlation (ICC), which indicates the proportion of variance that exists between versus within classrooms or schools (ICCs were 7% in Manganelli et al., 2015, and 5% to 9% in Hoskins et al., 2012). Thus, while the effects of an open climate aggregated to the classroom level might be significant, the importance is relatively small compared to the effects of individual-level variables. Furthermore, Dassonneville et al. (2012) found no effect of an open classroom on political self-efficacy in Belgium and their study revealed very small differences between classrooms and schools (total ICC for class and school level was only about 5%).

A second limitation (particularly pressing for studies that treat classroom climate via students' individual perceptions) is failure to account for individual psychological differences in adolescents. Prior research has already underscored the role of adult personality in political behavior (Mondak & Halperin, 2008; Mondak, Hibbing, Canache, Seligson, & Anderson, 2010). Thus, not including personality dispositions might result not only in biased estimates of classroom effects, but also in disregard of potentially important determinants of students' political self-efficacy. We assume that capturing the role of personality, together with the role of school context, would provide better insight into the development of political self-efficacy in adolescence.

We intend for our study to fill the gap in knowledge related to the role of personality by focusing on two dispositions: shyness and need for cognition. We presume that both dispositions affect the development of political self-efficacy since they shape the motivations to engage in and the appraisals of mastery experiences. We propose that greater shyness represents an inhibiting factor due to people's increased anxious expectations and responsiveness, whereas greater need for cognition is hypothesized to enhance political self-efficacy due to its function as a cognitive motivator of political behavior.

Shyness can be defined as discomfort and inhibition in the presence of other people (Hopko, Stowell, Jones, Armento, Cheek, 2005) and is characterized by increased anxiety in

social situations (Leary, 2013). According to Bandura (1997), one of the factors affecting self-efficacy beliefs is emotional arousal associated with mastery experiences. Because anxious responses can result in the avoidance of stressful situations and negative appraisals of accomplishments, shyness may pose a barrier to both involvement in mastery experiences as well as their evaluation. Shyness has already been linked with lower self-efficacy in the area of interpersonal behavior (i.e. capacity to manage social and family life) in middle adolescents (Caprara, Steca, Cervone, & Artistico, 2003). Shy students (aged 13-16 years) also reported that they tended to be more passive in school activities such as classroom discussions (Paulsen, Bru, & Murberg, 2006), and thus their opportunities to develop and practice civic skills were limited compared to less shy students. Considering that political activities often require a certain level of interpersonal skills (e.g., for negotiations or organizing collective activities), it is probable that shyness also undermines the development of political self-efficacy. This suggestion is further supported by the finding that extraversion, a personality trait negatively related to adolescents' shyness (Lawrence & Bennett, 1992), positively correlates with political self-efficacy in adulthood (Vecchione & Caprara, 2009).

The second disposition examined in this study is need for cognition, a tendency to enjoy thinking and to seek and engage in effortful cognitive activities, as opposed to a tendency to avoid complex tasks (Cacioppo & Petty, 1982). Need for cognition underlies increased involvement in various types of activities in school environments, including engagement in discussions and arguments. For example, a study on college undergraduates showed that increased need for cognition was positively correlated with a tendency to approach argumentative situations (Nussbaum & Bendixen, 2003). We expect that such engagement, in turn, affects self-beliefs concerning one's abilities. For instance, it has been shown that undergraduates' greater need for cognition is connected with increased academic self-efficacy (Elias & Loomis, 2002). Moreover, people with a high need for cognition react

more positively to political stimuli and are more interested in politics (Cacioppo, Petty, Feinstein, & Jarvis, 1996; Condra, 1992). Politics is a complex area, and understanding it requires considerable cognitive effort. Therefore, it is not surprising that people with higher need for cognition are more open to political stimuli, while people with lower need for cognition tend to avoid this area. In this regard, the effect of need for cognition might be compared to openness to experience, a personality trait positively associated with need for cognition (Furnham & Thorne, 2013; Sadowski & Cogburn, 1997). Openness to experience has been proposed to be typically characterized by a "craving for information," which explains its generally positive relation to political behavior (Mondak, 2010; Vecchione & Caprara, 2009) and political self-efficacy (Vecchione & Caprara, 2009).

The present study

In sum, our aim is to investigate the relation of cognitive and emotional components of personality and school context with political self-efficacy for local politics (see Figure 1). The cognitive personality component is represented by need for cognition and the emotional component is represented by shyness. School context is captured via open classroom climate and the quality of relationships among classmates. We expect the relations between personality, school, and local political self-efficacy to be mediated by school political self-efficacy and the perceived acquisition of civic skills at school. Based on previous research, we differentiate between students' subjective perceptions of school context and contextual characteristics, which are operationalized via the mean of students' perceptions in the classrooms. In our examination, we also control for the associations with gender, socioeconomic status, and the type of school.

[Figure 1 about here]

Method

Participants and procedure

We employed a random cluster sampling of schools within four (out of 14) regions in the Czech Republic. In this country, compulsory education is typically provided in so called elementary schools (first to ninth grade), while higher education is provided in either vocationally-oriented, or academically-oriented high schools (from the tenth grade). A limited number of students enter academically-oriented high schools starting in the sixth or eighth grade. Hence, the schools were randomly selected from a list of all elementary and high schools (not including schools for children with special needs), taken from an official register of the Ministry of Education, Youth and Sports. All available ninth and tenth grade classrooms were included in the study. Overall, we sampled 130 classrooms nested in 70 schools (more precisely, 68 schools were sampled but two of them actually comprised both vocational and academic classrooms, thus we treated them as separate schools).

In total, 2,090 students entered the study. We discarded participants 18 or more years old who already had full political rights (e.g., to vote), which might have affected their political self-efficacy beliefs, and those who did not indicate their classrooms. As a result, a final sample comprised 1,954 adolescents (52% females; M_{age}=15.60, SD=0.70). Mean classroom size was 15.30. Participants were ninth graders from elementary schools (42%), tenth graders from vocationally-oriented high schools (39%), and ninth or tenth graders from academically-oriented high schools (19%). About one quarter of students (23%) came from small villages (less than 3,000 inhabitants) in rural areas, 34% lived in smaller towns (population between 3,000 and 15,000), 28% lived in bigger towns (population between 15,000 and 50,000), and 16% came from cities (population over 50,000).

Data were collected via self-report paper or electronic questionnaire, completed at schools in May and June 2014. Compared to the situation before the parliamentary election in October 2013, the political climate of the Czech Republic in 2014 was characterized by increasing political satisfaction and trust in political institutions (Institute of Sociology of the

Czech Academy of Sciences, 2016). The public debate on political issues was shaped by three types of election (European, local, and Senate) that took part in that year. On the other hand, the debate was not markedly affected by the immigration issue, which was a prominent topic the following year.

Measures

Political self-efficacy (PSE). Scales measuring local and school PSE (i.e. internal political efficacy) were constructed based on general guidelines for creating self-efficacy scales (Bandura, 2006) and more general political self-efficacy measures (Caprara et al., 2009; Sohl & Arensmeier, 2015). Using four items, participants assessed their belief that they could carry out four local political activities: organizing a local demonstration; organizing a petition; negotiating with local politicians; and leading a group that stands up for some local cause (e.g., "If I wanted, I think I would be able to negotiate with local politicians"). In addition, adolescents used three items to assess their belief that they could carry out three activities in their schools: representing their classroom when negotiating with the school principal; organizing a student protest; and pushing through their opinion regarding school in their classroom (e.g., "If I wanted, I think I would be able to organize a student protest in my school"). A four-point response scale ranging from *absolutely disagree* (=1) to *absolutely agree* (=4) was used and total scores were created by averaging the items (for local PSE: α=.86; M=2.27; SD=0.76; for school PSE: α=.80; M=2.42; SD=0.76). If not stated otherwise, we used the same response scale and averaged the items for all the subsequent scales.

Confirmatory factor analysis of the items measuring PSE was used to find out whether they represented two separate dimensions. We estimated two models using maximum likelihood estimator in Mplus 7.4 software: one model assumed that four local PSE and three school PSE items indicated two correlated but different factors, while another model assumed that all seven items indicated one common factor. No correlations between residual terms or

multiple factor loadings were allowed. Results showed that the two-factor model (χ^2_{13}=79.29; CFI=.99; RMSEA=.05; inter-factor correlation =.54; standardized factor loadings from .69 to .82) represented the data better than the single-factor model (χ^2_{14}=1119.27; CFI=.80; RMSEA=.20; standardized factor loadings from .47 to .80).

Civic skills acquired at school. A four-item scale was loosely based on the IEA Civic Education Study (Torney-Purta, Lehmann, Oswald, & Schulz, 2001). Participants were asked whether they had learned four skills in their schools: to cooperate with other students on group tasks; to understand people with different opinions; to present their opinion in front of others; and to express their opinion in an essay (e.g., "In my school, I have learned to understand people with different opinions;" α=.67; M=3.02, SD=0.54).

Shyness. Six items from the Revised Cheek and Buss Shyness Scale were used (Hopko et al., 2005; e.g., "I feel tense when I'm with people I don't know well;" α=.77; M=2.29; SD=0.58).

Need for cognition. Eight items from the Czech translation (Širůček, Ťápal, & Linhartová, 2014) of the Need for Cognition Scale (Cacciopo & Petty, 1982) were used (e.g., "I would prefer complex to simple problems;" α=.67; M=2.47; SD=0.45).

Open classroom climate. Students' perceptions of their classrooms as places to investigate issues and explore various opinions were measured by a six-item measure from the IEA Civic Education Study (Torney-Purta et al., 2001; e.g., "Teachers respect our opinions and encourage us to express them during class;" α=.71; M=2.58; SD=0.49).

Positive student relations. Relations to classmates were measured by three items from the Czech measure of classroom climate (Širůček, in press): "I don't feel comfortable in our classroom;" "Some classmates are hostile to me;" and "I don't get on with most of my classmates." All items were reverse coded (α=.74; M=3.19; SD=0.72).

Socioeconomic status. Participants indicated whether the total income of their household was "not sufficient to cover all needs" (=1); "barely covering all needs"; "covering all needs"; or "really high and causing no worries" (=4) (M=2.81; SD=0.62). They also reported the highest completed level of mother's and father's education. A dichotomous variable was created indicating whether at least one parent had a college education (=1; 33%).

Data analysis

Data were analyzed using multilevel linear modeling (maximum likelihood estimator with robust standard errors in Mplus 7.4 software). First, we decomposed individual-, classroom-, and school-level variance of outcome variables (civic skills, school PSE, and local PSE) in order to determine which variance components were statistically significant (Raudenbush & Bryk, 2002) and whether multilevel models were necessary.

Second, we estimated a path model depicted in Figure 1. In this model, individual-level civic skills, school PSE and local PSE were predicted by shyness, need for cognition, individual perceptions of open classroom climate, and individual perceptions of student relations. We also controlled for the individual effects of gender, parental education, and income. In addition, civic skills were allowed to predict school and local PSE, and school PSE was allowed to predict local PSE.

If the decomposition of variance showed that it was necessary to consider classroom or school levels of some outcomes, they were predicted by cluster (i.e. classroom or school) averages of perceived open classroom and student relations. A control variable was school type (elementary school being a reference category, two types of high school were entered as dummy variables).

Considering the large sample size, only statistically significant standardized effects larger than .10 were interpreted. Occasional missing values (covariance coverage ranged from 85% to 100%) were treated using a full information approach.

Results

Results showed almost no classroom or school-level differences in civic skills, school PSE or local PSE. The only significant higher-level variance was classroom-level variance in civic skills, although, even in this case, intra-class correlation was very low (Table 1). Thus, only classroom-level predictors of civic skills were considered in multilevel modelling, while school and local PSE were treated as having only individual-level variance.

[Table 1 about here]

Table 2 shows correlations between individual-level variables. Civic skills, school PSE and local PSE were associated with both personality variables in expected directions. Civic skills were also associated with both classroom perceptions, but the links from school and local PSE to classroom perceptions were rather weak.

Results from multilevel analysis (see Figure 1, solid lines) can be found in Table 3. At the individual level, the perceived acquisition of civic skills was greater for students who perceived classroom climate as more open (β=.28, $p<0.01$) and who were less shy (β=-.24, $p<0.01$). In addition, there were small positive effects of need for cognition (β=.12, $p<0.01$), individual perceptions of student relations (β=.10, $p<0.01$), and female gender (β=.11, $p<0.01$). Differences between classrooms were completely explained by the type of school, with students from elementary schools perceiving civic learning as greater than did students from academic and vocational high schools, and more positive average student relations. Average perceptions of open classroom climate did not have significant effects on civic skills.

[Table 2 about here]

School PSE was greater for students who were less shy (β=-.39, $p<0.01$) and had a greater need for cognition (β=.23, $p<0.01$). These effects were almost completely direct, i.e. not being mediated by civic skills, which had only a medium to small effect on school PSE

(β=.18, p<0.01). Individual perception of open classroom was also a weak but significant predictor of school PSE (β=.13, p<0.01).

Finally, local PSE was greater for students who were less shy (β=-.26, p<0.01) and had a greater need for cognition (β=.20, p<0.01). Although being partially direct, substantial parts of these effects were mediated by school PSE, which had a medium to strong effect on local PSE (β=.38, p<0.01). School PSE also mediated a small indirect effect of civic skills on local PSE (β=.07, p<0.01).

[Table 3 about here]

Discussion

This study examined the relation of school environment and personal dispositions to the development of political self-efficacy in adolescents. While our findings highlight the role of individual dispositions, specifically shyness and need for cognition (i.e. the tendency to derive enjoyment from deep thinking or deliberation), which were both linked with the outcome, the role of school context is more complex.

Our results indicate that personal dispositions play an important role in self-efficacy development. According to our findings, shyness is an important barrier to the development of adolescents' political self-efficacy in both school and local contexts. It is probable that shy students who are generally prone to be more anxious in interpersonal situations (Leary, 2013) are less engaged in school events and activities (Paulsen et al., 2006) and thus lack mastery experiences that are important for the formation of (school) political self-efficacy. Moreover, it is possible that their increased anxiety associated with social situations leads to worsened subjective appraisals of their own performances (Clark & Arkowitz, 1975), which is another factor contributing to their lower self-efficacy beliefs (Bandura, 1997). At the same time, it should be noted that the relation between shyness and political self-efficacy might not be unidirectional. A longitudinal study focusing on the association between shyness and general

self-efficacy showed that self-efficacy predicted the development of shyness over time (Caprara et al., 2003). Therefore, the reinforcement of self-efficacy, including political self-efficacy (e.g., via positive feedback), could help shy students to decrease their inhibition in social situations.

Compared to shyness, need for cognition seems to play a positive role. Students with higher need for cognition tended to report higher acquisition of civic skills at school and stronger self-efficacy beliefs regarding both school and local politics. We might infer that these students are more active in their schools and, in turn, develop stronger senses of political self-efficacy through the resulting mastery experiences (Bandura, 1997). In this regard, their supposed higher interest in politics (Condra, 1992) can serve as an additional motivating factor for civic learning and civic participation at school. Our findings support the line of research stressing the role of both emotional and cognitive components of personality in political behavior and development (Mondak, 2010).

Next, our results suggested that there were no substantial differences between schools or classrooms in terms of students' mean political self-efficacy or their perceived acquisition of civic skills at school. These findings are similar to those from Dassonneville et al. (2012), who found no association between average classroom climate and students' political self-efficacy. Furthermore, the magnitude of school or classroom differences was low even in the studies that revealed statistically significant effects of average open classroom on students' political self-efficacy (Hoskins et al., 2012; Manganelli et al., 2015). Hence, contextual characteristics such as open classroom or positive student relationships seem to have only a limited general association with students' political self-efficacy. Their actual inter-relation, which varies from small (in the previous studies) to negligible (in this study), is probably not straightforward and depends on the broader context and on measurement techniques. Moreover, in the same classroom, some students might feel respected and free to

participate in class discussions, while others may not, which makes it difficult to detect any general effects of classroom context.

Looking at structural differences between schools and classrooms, there were almost no differences in students' political self-efficacy and only small differences in the perceived acquisition of civic skills. These small differences were primarily attributable to school type and, to a limited extent, to classroom climate. Specifically, ninth graders from elementary schools reported greater skills acquisition than high school students, which can be explained by the time spent in the school setting. In other words, ninth graders spent nine formative years in their schools and thus had more time to learn civic skills, while tenth graders from high schools had only a little less than one year to acquire civic skills in the new school environment. This explanation, however, is only hypothetical and cannot be directly inferred from our data. Next, greater perceived skills acquisition was slightly associated with positive relations among students in the classroom, suggesting that the learning of civic skills might be more effective in friendly and supportive social environments. However, this association of positive student relations was limited and did not have any observable consequences for students' average political self-efficacy.

Still, we cannot say that school has a negligible effect on the learning of civic skills and political self-efficacy. First, students' subjective perception of open classroom climate was an important (even the strongest) predictor of their perceived acquisition of civic skills. Although the opposite causal direction – i.e. students with greater civic skills tend to perceive their classroom as more open – cannot be ruled out, it is probable that a subjective feeling of an open atmosphere in the classroom facilitates students' acquisition of civic skills. Second, the relations of shyness and need for cognition with local political self-efficacy were partially mediated through school political self-efficacy (the effect from school to local political self-efficacy remained relatively strong even when accounting for personality). Thus, while

general classroom climate per se was not associated with political self-efficacy, we can presume that political self-efficacy developed within school could be transferred into the domain of local politics.

Regarding control variables, the only substantial, but still small, effect was found for gender. Specifically, female students reported slightly greater acquisition of civic skills at school than males, while there were no gender differences in school or local political self-efficacy. This result might seem surprising considering that another study found generally lower political self-efficacy for female than male students (Barber & Torney-Purta, 2009). On the other hand, the same study found that the magnitude of the gender gap in political self-efficacy considerably varied across countries. Therefore, our results regarding gender should be rather understood as specific to the Czech Republic.

Our conclusions should be interpreted with caution due to several limitations. Although the study used multilevel data, which was its strength, the design was still cross-sectional. Hence, causal inferences should be made with caution. For instance, it is possible that local political self-efficacy affects political self-efficacy at school, or school political self-efficacy and perceived acquisition of civic skills at school affect one's subjective perceptions of open classroom. We also based our results on students' individual reports; a multi-informant perspective would increase the reliability of our measures. Specifically, it would be fruitful to collect teachers' reports regarding the classroom climate and the acquisition of civic skills. Finally, future studies should also control for other effects contributing to the development of political self-efficacy, such as family environment, in order to gain more precise estimates of the effects of school.

Despite its limitations, our study clearly suggests that the effects of school on adolescents' political self-efficacy must be considered carefully. Political self-efficacy beliefs seem to depend considerably on adolescents' personality dispositions, and it is important to

take personality variables such as need for cognition and shyness into account when explaining the development of political self-efficacy in adolescents. Although these conclusions are general, they might be particularly important for countries where the opportunities for students to develop political self-efficacy at school are rather limited. The Czech Republic in an example of such a country, as it is characterized by a relatively low level of perceived influence on decisions about school on the part of students, a low level of open classroom climate, and a relatively low level of student participation in class activities (Schulz et al., 2010).

Overall, apart from looking for general characteristics of classroom climate that boost students' political self-efficacy, a more in-depth perspective would seem to be useful. Such a perspective should consider students' individual mastery experiences, through which they develop a sense of school political self-efficacy that can turn into local political self-efficacy. At the same time, both teachers and researchers should take into account that these processes are shaped by adolescents' stable individual characteristics such as shyness or need for cognition. More specifically, if teachers are aware that adolescents come to the classroom with considerably different dispositions for acquiring civic skills and political self-efficacy, they can provide extra assistance to those students who are disadvantaged, for instance, by their extreme shyness. In addition, it is useful to acknowledge that many organized classroom activities for learning and practicing civic skills might cause great discomfort to shy students and have outcomes that are likely to be opposite to those intended.

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Tables and Figures

Table 1. Unexplained variance at individual, classroom, and school level.

	Civic skills		School PSE		Local PSE	
σ^2_e	0.28**	(96%)	0.56**	(97%)	0.56**	(99%)
$\sigma^2_{classroom}$	0.01*	(3%)	0.01	(1%)	0.01	(1%)
σ^2_{school}	0.00	(1%)	0.01	(2%)	0.00	(0%)
Total intra-class correlation	4%		3%		1%	

Note. ** $p < .01$. * $p < .05$. N=1,954.

Table 2. Correlations between individual level variables.

	1.	*2.*	*3.*	*4.*	*5.*	*6.*	*7.*	*8.*	*9.*
1. Civic skills									
2. School PSE	.34								
3. Local PSE	.19	.46							
4. Shyness	-.28	-.42	-.27						
5. Need for cognition	.19	.32	.24	-.14					
6. Open classroom climate	.33	.16	.07	-.03	.12				
7. Positive student relations	.22	.10	.02	-.20	.07	.20			
8. Gender (Female)	.14	.00	.00	.01	-.01	.11	.00		
9. Parental education	.02	.12	.07	-.06	.18	-.02	.05	-.03	
10. Household income	.03	.08	.03	-.15	.04	.05	.08	-.06	.15

Note. N=1,954.

Table 3. Multilevel model predicting civic skills acquired at school, school PSE, and local PSE.

	Civic skills	School PSE		Local PSE	
	Direct (Total)	Direct	Total	Direct	Total
Individual level					
Civic skills		.18**		.04	.11**
School PSE				.38**	
Shyness	-.24**	-.35**	-.39**	-.10**	-.26**
Need for cognition	.12**	.21**	.23**	.10**	.20**
Open classroom climate	.28**	.08**	.13**	-.01	.05
Positive student relations	.10**	-.04	-.02	-.06*	-.06*
Gender (Female)	.11**	-.02	.00	-.01	-.01
Parental education	-.01	.06**	.06**	.00	.02
Household income	-.02	-.01	-.01	-.02	-.02
Classroom level					
Open classroom	0.21 (0.10)				
Student relations	0.31 (0.13)*				
School (Vocational)	-0.11 (0.03)**				
School (Academic)	-0.12 (0.04)**				
σ^2_e	0.22**	0.41**		0.44**	
$\sigma^2_{classroom}$	0.00				

Note. Standardized effects are presented for the individual level; non-standardized effects (with standard errors in parentheses) are presented for the classroom level. **$p < .01$. *$p < .05$. Model fit: $\chi^2_5=26.72$; CFI=.99; RMSEA=.05. N=1,954.

Figure 1. Theoretical model predicting political self-efficacy.

Note. Variables and corresponding paths that were not included for empirical testing due to negligible higher-level variances are marked with dashed lines. For the sake of clarity, control variables (gender, parental education, income, school type) are not depicted.