Chapter 6
The Role of Classroom Discussion

Diego Carrasco and David Torres Irribarra

Abstract  Past research has shown that students in schools with greater levels of open classroom discussion, have more positive attitudes toward other groups and hold more democratic attitudes. Students do not learn citizenry only by knowledge acquisition; school practices such as classroom discussion foster critical thinking, help students to understand others and reduce closed-mindedness. Students with a higher exposure to classroom discussion were hypothesized to display more tolerant attitudes to other groups and hold more egalitarian values in general. The analytical strategy in this chapter uses a three-level path analysis with support for equal rights for women, for all ethnic/racial groups and for immigrants as outcomes. Appropriate variable centering and random intercepts for schools and countries enabled relationships between classroom discussion and the outcomes to be determined. Open classroom discussion was found to be positively related to egalitarian values across all samples, accounting for 5 to 8% of school variance, depending on the outcome.

Keywords Attitudes toward diversity · International Civic and Citizenship Education Study (ICCS) · International large-scale assessments · Multilevel path analysis · Open classroom for discussion

6.1 Introduction

One of the main aims of civic education is the promotion of democratic values, through the promotion of civic knowledge and the endorsement of democratic attitudes (Lenzi et al. 2014). The interpretation of democracy as “a mode of...
associated living” (Dewey 1916, p. 101) requires citizens to behave socially in different contexts. Schools are a key scenario for the socialization of these different modes of associated living.

The presence of injustice in its various forms erodes the legitimacy of democratic institutions. Prejudice, corruption and a lack of commitment to equality are primary concerns in this regard. Racism, sexism and anti-immigrant attitudes are all examples of different forms of prejudice. In contrast, egalitarian attitudes are the positive formulation of these dispositions. Because attitudes are developed and learned, it is generally thought that these can be unlearned as well (Zick et al. 2011). Schools are a major actor in this regard, as schools promote norms and values about how students should act in their community and their nation (Quaynor 2012). Thus, schools are an active agent in the process of supporting students to unlearn negative intergroup attitudes and to promote egalitarian attitudes and other relevant democratic values.

What schools do to promote democratic values matters? Past research has highlighted the relevance of school environments within civic education research, especially the perceptions of open classroom discussion, for its impact on different citizenship outcomes. This includes its positive relation to civic knowledge (Schulz 2002; Schulz et al. 2010; Torney et al. 1975), its positive relation to tolerant attitudes (Caro and Schulz 2012), and its negative relation to youth alienation (Torney-Purta 2009), by which we mean adolescents with high political disaffection and generalized negative attitudes toward others.

Measures of open classroom discussion aim to capture an aspect of the learning environment expected to influence the development of democratic principles. The open classroom discussion scores indicate whether students can discuss, during regular lessons, political and social issues in their classrooms, what level of encouragement they receive in developing informed opinions during those discussions, and if students receive teacher guidance to debate the arguments. Thus, this score measures how regularly students can openly discuss political and social issues at their school.

As open classroom discussion is a reflective measure of the learning environment, and not an individual difference like socioeconomic background (Lüdtke et al. 2008); care must be taken when using these responses as school differences in multilevel models to avoid underestimating some of the effects (Lüdtke et al. 2009). The present chapter relies on this approach, where student responses are the source of information about their school practices and students rate their learning environments.

After reviewing the research literature on civic education and attitudes toward others, we developed a plausible link between the learning environment differences and students’ endorsement of egalitarian attitudes. This reflective measure approach to school climate factors informed our estimated model.
6.2 Conceptual Background

6.2.1 Schools and Egalitarian Attitudes

When researchers study intergroup attitudes, they commonly find a relationship between educational attainment and prejudice (Easterbrook et al. 2015). For example, people with lower levels of education are generally more prone to prejudice than people with higher educational attainment (Coenders and Scheepers 2003). Moreover, longitudinal studies comparing academic tracks and vocational tracks have found that students in academic tracks develop more tolerant attitudes over time, while students on vocational tracks develop less tolerant attitudes toward others (Hooghe et al. 2013a, b; Vollebergh 1996). Thus, different school experiences may shape youth attitudes toward other groups.

How can these differences be explained? The ‘sophistication hypothesis’ (Highton 2009; Luskin 1990) suggests that people develop the necessary cognitive skills for democracy through education. The schooling process provides more sophisticated knowledge to people, and this information promotes the development of less prejudiced attitudes (Easterbrook et al. 2015). Thus, schools which provide a more democratic environment are expected to foster more egalitarian attitudes.

Complementary to this, within this framework, socially and economically disadvantaged groups are thought to be more prone to prejudice (Lipset 1959) because they are exposed to more negative experiences which often translate into ethnic prejudice. Restrictions in cultural, intellectual or family resources prevent low-status members of society from expanding their understanding of different groups and ideas (Carvacho et al. 2013). In essence, differences in “cultural capital” (the ability to understand the way of life of others; Houtman 2003) hinders the development of egalitarian attitudes. Thus, students in schools that foster reflection and the understanding of other perspectives are expected to display more positive attitudes toward other social groups.

Creating opportunities for classroom discussion is an important way of fostering understanding of alternative points of view, as a way of increasing cultural capital. This is consistent with Dewey’s theories on education and democracy. Van der Ploeg (2016, p. 148) put it thus:

> For Dewey, morality is dependent on deliberation, reflection and insight. This means that *morality relies on communication and cooperation*. For an adequate assessment of the moral value of my actions, I need others’ contributions. Given that common good has to do with the conditions underlying the self-development of everyone, and so those of others as well, I require insight into others’ beliefs and wishes in order to contribute. The only way to acquire this is by interaction and communication. In addition, *my inquiry and reflection can benefit from cooperation with others, for instance inquiring together, reflecting together, benefitting from one another’s expertise, sharing knowledge, insight and experience and having discussions.* [Emphasis added]

In this sense, open classroom discussion can be understood theoretically as creating a privileged opportunity to gain “insight into others’ beliefs and wishes”, as
a school practice that fosters the understanding of others. A more psychological account posits that educational interventions directed to reduce the “need for closure”, a form of cognitive conservatism, and closed-mindedness, might reduce prejudice in an indirect way (Van Hiel et al. 2004). Differences between schools in this respect may explain the endorsement of different egalitarian values between schools.

6.2.2 Past Research

The importance of open classroom discussion in the development of social and political attitudes has been extensively researched through the data collected by the 1999 Civic Education Study (CIVED) and International Civic and Citizenship Education Study (ICCS) 2009 (see for example Barber et al. 2015; Campbell 2008; Caro and Schulz 2012; Godfrey and Grayman 2014; Schulz 2002; Schulz et al. 2010; Torney-Purta 2009). While there is no consensus regarding the psychological or social mechanisms through which open classroom discussion operates, these studies have consistently backed its role as an explanatory factor in the development of civic knowledge, a positive outlook toward political debate, and an interest in informed voting (Campbell 2008; Godfrey and Grayman 2014).

Despite its frame of reference being the classroom, the responses of students in open classroom discussion have been studied as differences in students’ experiences (see Caro and Schulz 2012; Torney-Purta 2009), and as differences between schools. In the latter approach, open classroom discussion has been assessed by excluding students’ individual scores and using school means only (for example, see Godfrey and Grayman 2014), or by including students’ individual scores and school means at the same time (see Schulz 2002; Schulz et al. 2010), as in common compositional models (Caro and Lenkeit 2012; Willms 2010).

As open classroom discussion scores are not a traditional individual difference measure in the way that, for example, socioeconomic background is (Lüdtke et al. 2008), the traditional model specification for compositional effects may result in unnecessary overcorrections of the between school difference (Lüdtke et al. 2009). Thus, standard recommendations for centering individual scores and school means scores to the overall mean (O’Connell and McCoach 2008) do not apply for these measures in the same way and have negative consequences for the intended inference.

Lüdtke et al. (2009) argued that the study of school environments should center its attention on the between-school differences when students are the informants. This translates into appropriately identifying if a measure is a reflective construct of a cluster level (Stapleton et al. 2016), and using appropriate centering techniques for responses. In practice, this treats student answers as if they are raters of their own learning environment.

The present work aims to uncover the role of open classroom discussion by measuring the between-school differences of open classroom discussion and using
group mean centering where appropriate. Additionally, previous results in the literature of open classroom discussion have reported a buffer effect over students’ disadvantaged background and other citizenship outcomes (for example Campbell 2008; Godfrey and Grayman 2014). In this chapter, we explore the plausible moderating effect of open classroom discussion on student characteristics and support for equal rights for women, all ethnic groups and immigrants.

6.3 Methods

6.3.1 Data

The data were taken from ICCS 2009 (for the specific description of this dataset see Chap. 2 in this volume). The final sample used for the analyses included in this chapter shows small variations from the original dataset, as the set of variables involved in these analyses have specific missing patterns. The final sample was 140,650 students, 5369 schools and 38 countries.

6.3.2 Variables

Dependent Variables

The dependent variables were attitudes toward equal rights for disadvantaged groups, including: immigrants, ethnic groups and women. These were derived from the original items from the attitudes toward gender equality, equal rights for all ethnic/racial groups and equal rights for immigrants that appeared originally in ICCS 2009. Using a multi-group confirmatory analysis, factor scores were derived and used as manifest variables. Thanks to reaching measurement invariance, these outcomes were in a comparable scale (see Chap. 3 for more details). These three variables were included in the analysis in this chapter, thus allowing us to account for the distribution of these three factors together.

Independent Variables

As explanatory variables (Table 6.1), we used the following factors from the ICCS 2009 public data file: civic knowledge (PV1CIV-PV5CIV) plausible value scores from students, open classroom discussion (OPDISC), socioeconomic status of the students (NISB), gender (SGENDER), and immigrant status (IMMIG). The last was recoded as a dummy variable, where the category of reference consisted of all non-immigrant students, and the effect category consisted of all students with an immigrant background, including students from a first generation immigrant background and students born in a different country.
6.3.3 Analytical Strategy

We specified a three-level path analysis model, where support for equal rights for women, support for equal rights for all ethnic/racial groups, and support for equal rights for immigrants are included as response variables. This allowed us to inspect the relationship between four variables of interest and an outcome while controlling for the level of the other dependent variables. This model included random intercepts at both school and country level, separating all observation dependencies and allowing us to draw cluster-specific inferences for school learning environments (McNeish et al. 2017). With the appropriate centering, this model supports the estimation of the overall mean of our covariate of interest across all samples (Brincks et al. 2017).

Open classroom discussion is a reflective measure of the school environment (Lüdtke et al. 2008; Stapleton et al. 2016) and not a classical individual difference measure. Its frame of reference is the learning environment and not just the experience of students as individuals. As such, it allows the capturing of the experience of students as a collective, relative to the learning environments students are in. Thus, in order to appropriately study its relationship to our outcomes, we divided this factor into two components: the within-cluster variation and the between-cluster variation (as suggested by Campbell 2008). This was achieved by centering the open classroom discussion scores to the school means. Additionally, we wanted to collect the pooled regressions estimate of open classroom discussion for the 38 samples included in this study. This provides an overall mean estimate of this covariate, across all samples. Hence, to achieve this, we had to adjust the previous between-cluster variation so it was correctly centered within countries (see

| Table 6.1 Independent variables from ICCS 2009 |
|-----------------------------------------------|
| Variable name | Independent variables | Type | Description |
|----------------|------------------------|------|-------------|
| PV1CIV-PV5CIV | Civic knowledge        | Continuous | Five plausible values stand for student civic knowledge scores. These were divided by the expected international standard deviation (10 pts) of the scale |
| OPDISC        | Open classroom discussion | Continuous | Open classroom discussion was decomposed into student deviations from their school mean, and school means within each country |
| NISB          | Socioeconomic status of the students | Continuous | Socioeconomic status was decomposed into student deviations from their school mean, and school means within each country |
| SGENDER       | Student gender         | Dummy | Female = 1, male = 0 |
| IMMIG         | Immigrant status       | Dummy | Students with immigrant background = 1, native = 0 |
Brincks 2012; Brincks et al. 2017). Using this specification, we can explain the relationship between open classroom for discussion across all compared learning environments and our three outcomes of interest in a single model.

We included as control variables: socioeconomic background of students, civic knowledge scores, gender and immigrant background. The two first variables were included in the model using the same centering approach as used for open classroom discussion. This, enabled us to assess whether the main effect under study was resistant to school differences across all samples in terms of the socioeconomic composition of the schools and to civic knowledge levels of the schools. In contrast, the last two variables were included purely as controls and were entered into the model centered to the country overall means so as to remove their effects (Heck and Thomas 2015). Hence, the estimates of the model accounted for school environments, with a similar composition in terms of gender and immigrant background.

To assess the impact of the open classroom discussion levels of schools, we explored its interaction with three terms using appropriate centering (Brincks et al. 2017; Dalal and Zickar 2012; Enders and Tofghi 2007): namely with student gender, immigrant background and socioeconomic background. None of these terms showed a significant effect and were removed from the reported model. We also included a product term between the open classroom discussion level of schools and the socioeconomic intake of schools, with both covariates centered at the country levels. The model can be expressed using Eqs. (6.1)–(6.3), which are specified for each of the three response variables being studied, namely support for equal rights for immigrants, different ethnic groups and women, as described in Chap. 2:

\[
Y_{ijk} = \pi_{0jk} + \pi_{1jk}(x_{ijk} - \bar{x}_{jk}) + \pi_{2jk}(m_{ijk} - \bar{m}_{jk})
+ \pi_{3jk}(w_{ijk} - \bar{w}_{jk}) + \pi_{4jk}(Z_{ijk} - \bar{Z}_{.k}) + \varepsilon_{ijk}
\]  
(6.1)

\[
\pi_{0jk} = \beta_{00k} + \beta_{01k}(\bar{x}_{jk} - \bar{x}_{.k}) + \beta_{02k}(\bar{m}_{jk} - \bar{m}_{.k})
+ \beta_{03k}(\bar{w}_{jk} - \bar{w}_{.k}) + \beta_{04k}(\bar{w}_{jk} - \bar{w}_{.k}) \times (\bar{x}_{jk} - \bar{x}_{.k}) + r_{0jk}
\]  
(6.2)

\[
\beta_{00k} = \gamma_{000} + \nu_{00k}
\]  
(6.3)

In Chap. 5, we used a general equation form to express the estimated models (Eqs. 5.1–5.3). However, in this chapter, we provide further details, in order to explicitly state the role of centering of our variables on the interaction between the socioeconomic status (SES) of the school intake and schools differences in the open classroom discussion scores within each country. Here Y stands for the outcome variables, \(x_{ijk}\) for student socioeconomic background (NISB), \(m_{ijk}\) for student civic knowledge scores (PV1CIV–PV5CIV) divided by ten, \(w_{ijk}\) for student rates of open classroom discussion, and \(Z_{ijk}\) for the two control variables, namely gender (\(SGENDER, 0 = \text{boy}, 1 = \text{girl}\)) and student immigrant background (\(IMMIG, 0 = \text{non-immigrant}, 1 = \text{immigrant background}\)).
To estimate model results, we fitted a series of multilevel models using Mplus v7 (Muthén and Muthén 2012); multilevel pseudo maximum likelihood accounted for sampling design and scaling weights to sample size (Asparouhov 2006; Snijders and Bosker 2012). Changing the scaling methods of the weights had little effect on the results. Civic knowledge plausible values were all included in the model, and estimates were appropriately combined (Rutkowski et al. 2010).

6.4 Results

6.4.1 Overall Fit

Each of the estimated models present a better fit in comparison to their nested counterpart (see Table 6.2). We compared each estimated model by means of their deviances (−2LL), Akaike information criterion (AIC), and Bayesian information criterion (BIC). Since Mplus estimates one model for each of the plausible values, each fit index presents a mean point estimate and a standard deviation for each estimation. As comparing all the models by −2LL, AIC and BIC reached the same general conclusions, here we describe the relative comparison of AIC and BIC indexes alone. The general sequence of models starts from the null model, where all selected covariates were fixed to zero, and progresses to the most complex model, the moderation model, where selected covariates were allowed to vary. If AIC and BIC reach lower values, in contrast to a nested model, the most complex model is preferred. The null model was compared to the control model, where only the control variables (socioeconomic status, civic knowledge, gender, and immigrant background) were allowed to vary. This comparison favored the control model. The next or main model, which additionally included open classroom discussion,

| Criterion for model selection | Model | Null | Control | Main | Moderation |
|-------------------------------|-------|------|---------|------|------------|
| −2 LL                         |       | 2353257.59 | 2330616.86 (32.75) | 2327466.02 (29.33) | 2327410.05 (29.41) |
| AIC                           |       | 2353293.59 (0.00) | 2330688.86 (65.50) | 2327550.02 (58.65) | 2327500.05 (58.81) |
| BIC                           |       | 2353400.23 (0.00) | 2330902.14 (65.50) | 2327798.84 (58.65) | 2327766.65 (58.81) |
| df                            |       | 18 | 36 | 42 | 45 |

−2LL deviance, AIC akaike information criterion, BIC Bayesian information criterion, df degrees of freedom. The mean standard deviation for each estimation is provided in brackets

1Reported results were robust to changes in the scaling methods of the weights. Differences were observed only to the third decimal point, and these were only of one unit.
compared favorably with the control model. Finally, the most complex moderation model, which included interaction terms, open classroom discussion school means and socioeconomic status school means, also fitted the data better than its nested counterpart (Table 6.2). Overall, the relative fit of the models favored our selection of variables. The intra-class correlation coefficient at the school level was in the range 5.2–5.1% for each outcome, whereas the intra-class correlation at the country level, was 10–14%; most of the variance in the outcomes was thus at the student level (Table 6.3).

### 6.4.2 Main Effects

Overall, schools with higher levels of open classroom discussion had students who were more likely to endorse gender equality ($\beta_{03k} = 0.20$, SE = 0.02, $p < 0.01$), hold higher levels of support for equal rights for all ethnic groups ($\beta_{03k} = 0.21$, SE = 0.02, $p < 0.01$), and show greater support for equal rights for immigrants ($\beta_{03k} = 0.18$, SE = 0.02, $p < 0.01$). While the control variables accounted for 52, 44 and 34% of the variance between schools for each respective outcome, adding schools’ open classroom discussion levels accounts for 7, 8 and 5% additional variance for each outcome, respectively.

School composition, in terms of socioeconomic background and levels of civic knowledge, also showed positive relationships between schools. School environments with a higher proportion of students with a higher socioeconomic background displayed higher mean levels of support for gender equality ($\beta_{01k} = 0.53$, SE = 0.13, $p < 0.01$), higher levels of support for equal rights for all ethnic groups ($\beta_{01k} = 0.29$, SE = 0.15, $p < 0.01$), and greater support for equal rights for immigrants ($\beta_{01k} = 0.36$, SE = 0.14, $p < 0.01$). Similarly, schools with higher levels of civic knowledge also showed higher levels of endorsement for equal rights for women

### Table 6.3 Random effects estimates, multilevel model

| Dependent variable | Parameter | E   | SE   | P    |
|--------------------|-----------|-----|------|------|
| Gender equality    | Intercept | 50.52 | −0.63 | 0.00 |
|                    | Within variance | 69.08 | −3.73 | 0.00 |
|                    | Between school variance | 2.13 | −0.28 | 0.00 |
|                    | Between country variance | 13.84 | −3.52 | 0.00 |
| Ethnic equality    | Intercept | 50.80 | −0.60 | 0.00 |
|                    | Within variance | 73.69 | −3.64 | 0.00 |
|                    | Between school variance | 2.44 | −0.26 | 0.00 |
|                    | Between country variance | 10.42 | −3.09 | 0.00 |
| Immigrant equality | Intercept | 51.39 | −0.56 | 0.00 |
|                    | Within variance | 75.83 | −3.91 | 0.00 |
|                    | Between school variance | 3.16 | −0.40 | 0.00 |
|                    | Between country variance | 11.76 | −2.31 | 0.00 |

$E$ estimated coefficients; $SE$ standard deviation; $P$ p-value
(β₀₂ᵏ = 0.23, SE = 0.02, p < 0.01), all ethnic groups (β₀₂ᵏ = 0.21, SE = 0.12, p < 0.01), and immigrants (β₀₂ᵏ = 0.14, SE = 0.02, p < 0.01). However, these differences were not attributable to school contextual effects; that is, they were not attributable to the unique school contribution to these relationships.

### 6.4.3 Moderation Effects

There was a negative interaction between school open classroom discussion levels and school socioeconomic levels, relative to support for equal rights for women (β₀₄ᵏ = −0.07, SE = 0.02, p < 0.01). A negative coefficient implies a buffer effect: a school’s intake is positively related to the higher endorsement of gender equality, yet conditional on the level of open classroom discussion within schools (see Table 6.4). Thus, schools with a high intake of students from lower socioeconomic backgrounds, yet with higher than average open classroom discussion, are expected to have a higher level of endorsement for gender equality than other similar schools with lower levels of open classroom discussion. To assess these findings, we fitted the same implied model for each country. This enabled us to assess the consistency

| Table 6.4 Fixed effects estimates, multilevel model |
|------------------------------------------|
| Variables                          | Within school estimates | Between school estimates |
|------------------------------------------|
| **Dependent**                      | **Independent** | E | SE | P | E | SE | P |
| Gender equality                     | SES                 | 0.18 | 0.05 | 0.00 | 0.53 | 0.13 | 0.00 |
|                                         | Civic knowledge     | 0.34 | 0.01 | 0.00 | 0.23 | 0.02 | 0.00 |
|                                         | Gender              | 2.98 | 0.35 | 0.00 |     |     |     |
|                                         | Immigrant background| 1.08 | 0.24 | 0.00 |     |     |     |
|                                         | Open classroom discussion | 0.13 | 0.01 | 0.00 | 0.20 | 0.02 | 0.00 |
|                                         | SES: open classroom discussion |     |     |     | −0.07 | 0.02 | 0.00 |
| Ethnic equality                      | SES                 | 0.20 | 0.06 | 0.00 | 0.29 | 0.15 | 0.06 |
|                                         | Civic knowledge     | 0.31 | 0.01 | 0.00 | 0.21 | 0.02 | 0.00 |
|                                         | Gender              | 1.81 | 0.21 | 0.00 |     |     |     |
|                                         | Immigrant background| 3.49 | 0.66 | 0.00 |     |     |     |
|                                         | Open classroom discussion | 0.14 | 0.01 | 0.00 | 0.20 | 0.02 | 0.00 |
|                                         | SES: open classroom discussion |     |     |     | 0.01 | 0.02 | 0.76 |
| Immigrant equality                   | SES                 | 0.18 | 0.07 | 0.01 | 0.36 | 0.14 | 0.01 |
|                                         | Civic knowledge     | 0.24 | 0.01 | 0.00 | 0.14 | 0.02 | 0.00 |
|                                         | Gender              | 1.76 | 0.24 | 0.00 |     |     |     |
|                                         | Immigrant background| 5.08 | 0.64 | 0.00 |     |     |     |
|                                         | Open classroom discussion | 0.14 | 0.01 | 0.00 | 0.20 | 0.02 | 0.00 |
|                                         | SES: open classroom discussion |     |     |     | −0.01 | 0.03 | 0.67 |

*SES* socioeconomic status; *E* estimated coefficients; *SE* standard deviation; *P* *p*-value
of our results, given that pooled coefficients may be “overpowered” by the size of the samples involved in these estimates. Results by country showed that the moderation effect was not a consistent estimate for all countries (see Fig. 6.1). The

![Fig. 6.1 Interaction effect between open classroom discussion scores and the average socio-economic level of school intake on support for equal rights for women. Unstandardized coefficients for the interaction term of open classroom discussion school means and SES school means. Mean estimates are plotted as black dots, with accompanying lines indicating the extent of the 95% confidence intervals. Results from Liechtenstein are not included, as these were beyond acceptable confidence limits. The mean for all countries is indicated by a dotted line](image-url)
results of the single-country models indicated that a statistically significant interaction between school open classroom discussion and school socioeconomic status was only found for Austria. Austria was thus the only country where schools with similar socioeconomic intakes reported stronger support for women’s equal rights when there was a greater level of open classroom discussion.

6.5 Discussion and Conclusions

School practices for the discussion of controversial issues are important for students and school egalitarian attitudes. The levels of openness to the discussion of political and social issues in classrooms during regular lessons were systematically related to student attitudes toward equal rights for women, all ethnic groups and immigrants. This relationship is positive when pooled across all jurisdictions. By partitioning student scores of perceptions of openness in classroom discussion into school means and student deviations from school means, we were able to examine the role of this learning environment factor (Lüdtke et al. 2009). These patterns of results were robust when controlling for student characteristics, such as gender, immigrant background, socioeconomic background and student civic knowledge. They were also unaffected by school differences in terms of school socioeconomic intake and the overall civic knowledge of students in school.

What “schools do” matters in establishing students’ support for equal rights. The general idea, that social attitudes, such as prejudice, racism and sexism are learned and developed also leads to the idea that these attitudes may be unlearned (Zick et al. 2011). Relevant school climate factors suggest potential school differences that may foster the development of egalitarian attitudes toward others. Openness to discussion in a school may not only be important for its relation to civic knowledge (Schulz 2002; Schulz et al. 2010; Torney et al. 1975), it may also establish interest in informed voting and the ability to embrace conflict within democracy (Campbell 2008; Godfrey and Grayman 2014). In the light of the results in this chapter, open classroom discussion may also be important for fostering egalitarian attitudes among students. Van Hiel et al. (2004) suggested that educational interventions aimed at reducing the “need for closure”, a form of cognitive closed-mindedness, might reduce authoritarianism, a common predictor of prejudice. School interventions with teachers have been able to promote higher levels of open classroom discussion in the United States (Barr et al. 2015). However, these have not translated into a reduction of prejudice. Current results are encouraging, however, showing positive results for this line of reasoning across different contexts.

Discussion of political and social issues within classrooms is often avoided in schools (Quaynor 2012). Encouraging students to discuss controversial issues and allowing them to make up their own minds, while presenting several sides of the argument, requires a teacher who displays committed impartiality (Kelly 1986); teachers are not only required to balance classroom discussion to be inclusive of different views but also participate in the discussions with a personal position on the
issue. Without proper institutional support for teachers by local school authorities, discussing controversial issues involving race, immigration and gender in the classroom may be silenced by self-censorship. Regional and national perspectives regarding the gender rights, institutional discrimination between races, and immigration may establish that large differences exist regarding what are the current norms and how far these are from ethical ideals of equal rights for all. Thus, clear curricular guidelines and support for teachers can be powerful tools to encourage classroom discussion of political and social issues as a common school practice, and through it fostering improved political attitudes and civic engagement.

References

Asparouhov, T. (2006). General multi-level modeling with sampling weights. *Communications in Statistics: Theory and Methods, 35*(3), 439–460. https://doi.org/10.1080/03610920500476598.

Barber, C., Sweetwood, S. O., & King, M. (2015). Creating classroom-level measures of citizenship education climate. *Learning Environments Research, 18*(2), 197–216. https://doi.org/10.1007/s10984-015-9180-7.

Barr, D. J., Boulay, B., Selman, R. L., Mccormick, R., Lowenstein, E., Gamse, B., et al. (2015). A randomized controlled trial of professional development for interdisciplinary civic education: Impacts on humanities teachers and their students. *Teachers College Record, 117*(20307), 1–52. Retrieved from http://www.tcrecord.org/content.asp?contentid=17470.

Brincks, A. M. (2012). The implications of centering in a three-level multilevel model. PhD thesis, University of Miami, FL. *Open Access Dissertations, 743*. Miami, FL: University of Miami. Retrieved from http://scholarlyrepository.miami.edu/cgi/viewcontent.cgi?article=1753&context=oa_dissertations.

Brincks, A. M., Enders, C. K., Llabre, M. M., Bulotsky-Shearer, R. J., Prado, G., & Feaster, D. J. (2017). Centering predictor variables in three-level contextual models. *Multivariate Behavioral Research, 52*(2), 149–163. https://doi.org/10.1080/00273171.2016.1256753.

Campbell, D. E. (2008). Voice in the classroom: How an open classroom climate fosters political engagement among adolescents. *Political Behavior, 30*(4), 437–454. https://doi.org/10.1007/s11109-008-9063-z.

Caro, D., & Lenkeit, J. (2012). An analytical approach to study educational inequalities: 10 hypothesis tests in PIRLS 2006. *International Journal of Research and Method in Education, 35*(1), 3–30. https://doi.org/10.1080/1743727X.2012.666718.

Caro, D., & Schulz, W. (2012). Ten hypotheses about tolerance toward minorities among Latin American adolescents. *Citizenship, Social and Economics Education, 11*(3), 213–234. https://doi.org/10.2304/csee.2012.11.3.213.

Carvacho, H., Zick, A., Haye, A., González, R., Manzi, J., Kocik, C., et al. (2013). On the relation between social class and prejudice: The roles of education, income, and ideological attitudes. *European Journal of Social Psychology, 43*(4), 272–285. https://doi.org/10.1002/ejsp.1961.

Coenders, M., & Scheepers, P. (2003). The effect of education on nationalism and ethnic exclusionism: An international comparison. *Political Psychology, 24*(2), 313–343. https://doi.org/10.1111/0162-895X.00330.

Dalal, D. K., & Zickar, M. J. (2012). Some common myths about centering predictor variables in moderated multiple regression and polynomial regression. *Organizational Research Methods, 15*(3), 339–362. https://doi.org/10.1177/1094428111430540.

Dewey, J. (1916). *Democracy and education*. New York, NY: The Macmillan Company.

Easterbrook, M. J., Kuppens, T., & Manstead, A. S. R. (2015). The education effect: Higher educational qualifications are robustly associated with beneficial personal and socio-political outcomes. *Social Indicators Research*. https://doi.org/10.1007/s11205-015-0946-1.
Enders, C. K., & Tofghi, D. (2007). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods, 12*(2), 121–138. https://doi.org/10.1037/1082-989X.12.2.121.

Godfrey, E. B., & Grayman, J. K. (2014). Teaching citizens: The role of open classroom climate in fostering critical consciousness among youth. *Journal of Youth and Adolescence, 43*(11), 1801–1817. https://doi.org/10.1007/s10964-013-0084-5.

Heck, R. H., & Thomas, S. L. (2015). *An introduction to multilevel modeling techniques: MLM and SEM approaches Using MPLUS*. New York, NY and Hove, UK: Routledge.

Highton, B. (2009). Revisiting the relationship between educational attainment and political sophistication. *The Journal of Politics, 71*(4), 1564. https://doi.org/10.1017/S0022381609990077.

Hooghe, M., Meeusen, C., & Quintelier, E. (2013a). The impact of education and intergroup friendship on the development of ethnocentrism. A latent growth curve model analysis of a five-year panel study among Belgian late adolescents. *European Sociological Review, 29*(6), 1109–1121. https://doi.org/10.1093/esr/jcs086.

Hooghe, M., Verhaegen, S., & Quintelier, E. (2013b). The relationship between political trust, generalized trust and European identity among adolescents. In *ECPR General Conference* (pp. 1–26). Bordeaux. Retrieved from https://ecpr.eu/filestore/paperproposal/e931616a-db49-40f1-8e74-e22c24d531e.pdf.

Houtman, D. (2003). Lipset and “working-class” authoritarianism. *The American Sociologist, 34*(1–2), 85–103. https://doi.org/10.1007/s12108-003-1008-8.

Kelly, T. E. (1986). Discussing controversial issues: Four perspectives on the teacher’s role. *Theory and Research in Social Education, 14*(2), 113–138. https://doi.org/10.1080/00933104.1986.10505516.

Lenzi, M., Vieno, A., Sharkey, J., Mayworm, A., Scacchi, L., Pastore, M., et al. (2014). How school can teach civic engagement besides civic education: The role of democratic school climate. *American Journal of Community Psychology, 54*(3–4), 251–261. https://doi.org/10.1007/s10464-014-9669-8.

Lipset, S. M. (1959). Democracy and working-class authoritarianism. *American Sociological Review, 24*(4), 482–501. Retrieved from http://www.jstor.org/stable/2089536.

Lüdtke, O., Marsh, H. W., Robitzsch, A., Trautwein, U., Asparouhov, T., & Muthén, B. (2008). The multilevel latent covariate model: a new, more reliable approach to group-level effects in contextual studies. *Psychological Methods, 13*(3), 203–229. https://doi.org/10.1037/a0012869.

Lüdtke, O., Robitzsch, A., Trautwein, U., & Kunter, M. (2009). Assessing the impact of learning environments: How to use student ratings of classroom or school characteristics in multilevel modeling. *Contemporary Educational Psychology, 34*(2), 120–131. https://doi.org/10.1016/j.cedpsych.2008.12.001.

Luskin, R. C. (1990). Explaining political sophistication. *Political Behavior, 12*(4), 331–361. https://doi.org/10.1007/BF00992793.

McNeish, D., Stapleton, L. M., & Silverman, R. D. (2017). On the unnecessary ubiquity of hierarchical linear modeling. *Psychological Methods, 22*(1), 114–140. https://doi.org/10.1037/met0000078.

Muthén, L. K., & Muthén, B. (2012). *Mplus user’s guide* (7th ed.). Los Angeles, CA: Muthén & Muthén. Retrieved from http://www.statmodel.com/.

O’Connell, A. A., & McCoach, D. B. (2008). *Multilevel modeling of educational data*. Charlotte, NC: IAP.

Quaynor, L. J. (2012). Citizenship education in post-conflict contexts: A review of the literature. *Education, Citizenship and Social Justice, 7*(1), 33–57. https://doi.org/10.1177/1746197911432593.

Rutkowski, L., Gonzalez, E., Joncas, M., & von Davier, M. (2010). International large-scale assessment data: Issues in secondary analysis and reporting. *Educational Researcher, 39*(2), 142–151. https://doi.org/10.3102/0013189X10363170.

Schulz, W. (2002). Explaining differences in civic knowledge: Multilevel regression analysis of student data from 27 countries. *American Educational Research Association, New Orleans,
Schulz, W., Ainley, J., Fraillon, J., Kerr, D., & Losito, B. (2010). *ICCS 2009 international report: Civic knowledge, attitudes, and engagement among lower-secondary school students in 38 countries*. Amsterdam, The Netherlands: International Association for the Evaluation of Educational Achievement (IEA).

Snijders, T. A. B., & Bosker, R. J. (2012). *Multilevel analysis: An introduction to basic and advanced multilevel modeling* (2nd ed.). London, UK: SAGE Publications Ltd.

Stapleton, L. M., Yang, J. S., & Hancock, G. R. (2016). Construct meaning in multilevel settings. *Journal of Educational and Behavioral Statistics, 41*(5), 481–520. https://doi.org/10.3102/1076998616646200.

Torney, J. V., Oppenheim, A. N., & Farnen, R. F. (1975). *Civic education in ten countries: An empirical study*. New York, NY: Wiley.

Torney-Purta, J. V. (2009). International psychological research that matters for policy and practice. *American Psychologist, 64*(8), 825–837. https://doi.org/10.1037/0003-066X.64.8.825.

Van der Ploeg, P. (2016). Dewey versus “Dewey” on democracy and education. *Education, Citizenship and Social Justice, 11*(2), 145–159. https://doi.org/10.1177/1746197916648283.

Van Hiel, A., Pandelaere, M., & Duriez, B. (2004). The impact of need for closure on conservative beliefs and racism: Differential mediation by authoritarian submission and authoritarian dominance. *Personality and Social Psychology Bulletin, 30*(7), 824–837. https://doi.org/10.1177/0146167204264333.

Willms, J. D. (2010). School composition and contextual effects on student outcomes. *Teachers College Record, 112*(4), 1008–1037.

Zick, A., Küpper, B., Hövermann, A., German, C., & Fenn, E. (2011). *Intolerance, prejudice and discrimination. A European report*. Berlin, Germany: Nora Langenbacher Friedrich-Ebert-Stiftung Forum Berlin Projekt. Retrieved from http://library.fes.de/pdf-files/do/07908-20110311.pdf.