

Civic Education Content (Alone) Does Not Improve Ethnic Tolerance

Jeremy Siow*

Abstract

Does civic education improve ethnic tolerance? Existing literature suggests that civic education promotes ethnic tolerance by teaching respect for diversity and fostering a shared national identity among different ethnic groups. I test this claim through (1) an investigation of a reform in Singapore that quasi-randomly assigned students to a new civic education course, and (2) a cross-national analysis of the International Civic and Citizenship Education Study (ICCS) data. Both studies reveal no significant improvement in ethnic tolerance among those exposed to civic education. One potential explanation is that the effectiveness of civic education depends on the degree of classroom openness. A reexamination of the Singapore case and ICCS data supports this revised hypothesis: civic education improves ethnic tolerance in open classroom settings, while its effects are negligible in restrictive environments. These results underscore the pivotal role of classroom pedagogy in amplifying the positive impact of civic education on ethnic tolerance.

Word count: 9,733 (excludes front page and bibliography)

Keywords: civic education, race and ethnic politics, open classrooms, political socialization

*Postdoctoral Research Fellow, Department of Politics and International Relations, University of Oxford.
Contact: jeremy.siow@politics.ox.ac.uk.

Political scientists and education researchers alike have devoted significant attention to understanding the behavioral and attitudinal effects of civic education (Galston, 2001; Niemi and Junn, 1998; Torney-Purta et al., 2001). A recurring finding within this body of research is that exposure to civic education strengthens political participation, efficacy, and knowledge among both youths and adults, in established (Campbell and Niemi, 2016; Niemi and Junn, 1998) and nascent democracies (Blair, 2003; Finkel, Neundorf and Rascón-Ramírez, 2023; Gottlieb, 2016). Additionally, recent empirical work has shown that civics classes can compensate for the absence of parental political socialization, thereby reducing what Levinson (2012) calls the ‘civic empowerment gap’ between the haves and the have-nots, with the largest effects being observed among racial minorities and other marginalized groups (Finkel, 2003; Nelsen, 2021; Neundorf, Niemi and Smets, 2016).

Despite extensive research on its political effects, little is known about whether civic education also fosters ethnic tolerance (but see Cantoni et al., 2017; Finkel, Horowitz and Rojo-Mendoza, 2012). This is surprising, as it seems reasonable to expect that the same features of civic education that affect political outcomes would also influence how students perceive outgroup members. In particular, there are two features within civic education content that could promote ethnic tolerance. First, a common theme found in many civic education programs is a deliberate focus on instilling civic values in the classroom, such as human rights and respect for diversity (Bromley, 2011; Finkel, Horowitz and Rojo-Mendoza, 2012; Finkel and Smith, 2011). As such, students who attend civics classes should internalize these norms and display greater tolerance towards ethnic outgroups. Second, many civic education curricula also place a strong emphasis on cultivating a shared national identity that transcends ethnic and other parochial identities (Cantoni et al., 2017; Lee, 2023). Thus, civic education may also contribute to increased intercommunal tolerance by recategorizing individuals from diverse ethnic groups into a more inclusive national ingroup (Gaertner et al., 2016). Taken together, these two explanations suggest that the content of civic education may play a crucial role in improving ethnic tolerance from an early age.

I investigate the validity of this claim through two empirical studies. First, I examine an education reform in Singapore, where students were quasi-randomly assigned to a new mandatory civic education course based on their birth years. The new course content emphasized the importance of interracial respect in a diverse society like Singapore and promoted an inclusive, non-ethnic vision of the country's national identity (Ho, 2009; Sim, 2011). This makes Singapore a most-likely candidate to uncover a positive relationship between civic education and ethnic tolerance. However, results from an original survey of 2,000 respondents in Singapore indicate that the new course did not lead to any significant improvement in ethnic tolerance among affected cohorts. As a follow-up, I conduct a second study by analyzing cross-national data from the 2016 International Civic and Citizenship Education Study (ICCS, Schulz et al., 2016), which sampled 90,000 eighth-graders from 24 countries. Consistent with the results from the first study, I do not find a statistically significant link between exposure to civic education and ethnic tolerance in the ICCS data.

One potential explanation for the null findings is that the effectiveness of civic education in fostering ethnic tolerance may depend on factors beyond the content of civic education itself, such as pedagogy (Gainous and Martens, 2012; Martens and Gainous, 2013; Nelsen, 2023) and classroom diversity (Janmaat, 2012; Ostwald, Ong and Gueorguiev, 2019). I consider the moderating role of open classrooms, as prior research has shown that this is one of the most effective approaches to improving students' political efficacy and knowledge in the classroom (Campbell, 2008; McAvoy and Hess, 2013; Persson, 2015). There are two reasons to expect that the positive connection between civic education and ethnic tolerance will be most pronounced among students who experience open classrooms. First, an open classroom atmosphere allows students to discuss contemporary issues that lie beyond the scope of many civic education curricula, such as systemic racism and discrimination. Second, an open classroom setting facilitates the sharing of diverse opinions and experiences, thereby helping students gain insights into other viewpoints not covered in the textbooks.

I revisit the two empirical studies by focusing on the moderating impact of open classroom

environments. In the Singapore case, anecdotal evidence from existing qualitative research suggests that the teaching of the new civic education course was fairly restrictive in terms of classroom discussion (Ho, 2010; Sim, 2011), which may account for the null effects observed in the first study. Furthermore, a reanalysis of the ICCS data reveals that the positive impact of civic education on ethnic tolerance was only evident among students who reported high levels of open classroom discussions. In contrast, civic education had a negligible effect on ethnic tolerance among eighth-graders who sat in classrooms where student-led discussions and open-ended exploration were not prioritized. Across both studies, the evidence indicates that civic education content alone does not improve ethnic tolerance. Rather, the findings underscore the pivotal role of open classroom environments in amplifying the positive effect of civic education on ethnic tolerance, and that the pedagogical underpinnings of civic education may be more influential than the content itself.

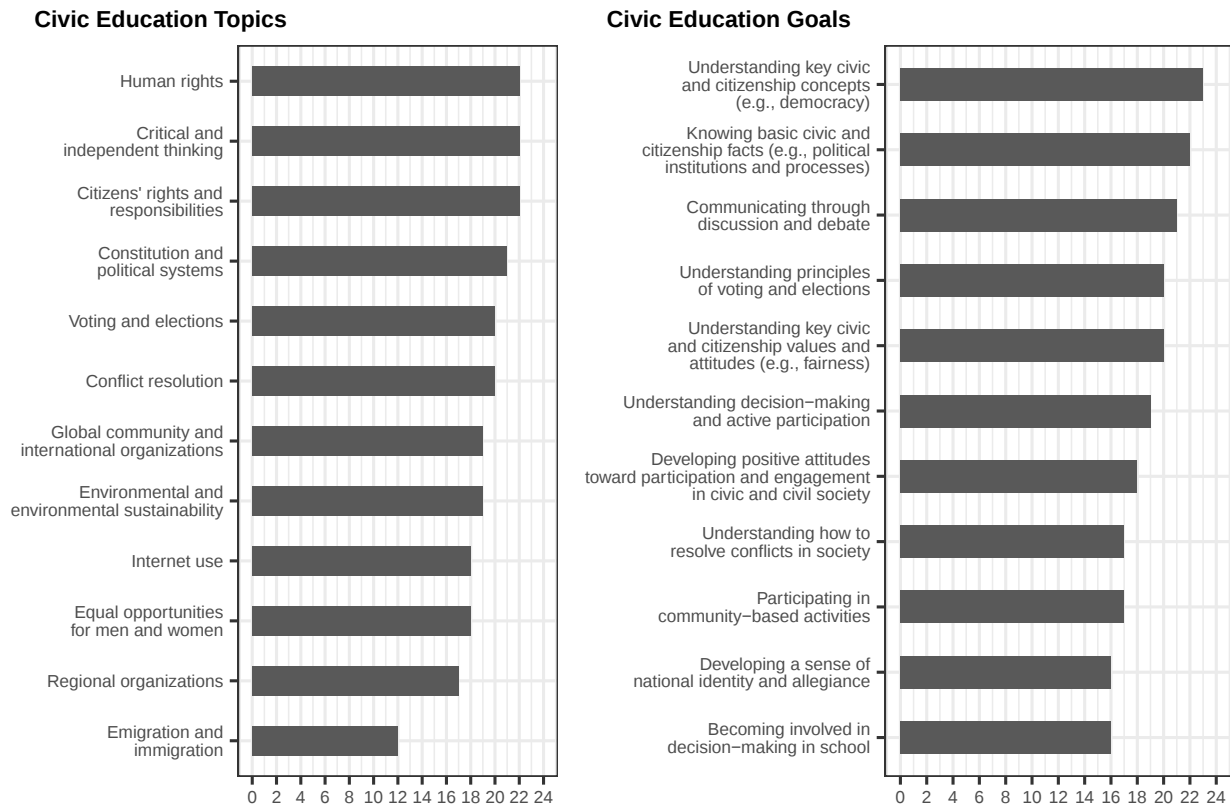
This article makes three important theoretical and policy contributions. First, it advances our understanding of the social and political effects of civic education by identifying a key condition under which these programs are effective in mitigating outgroup animus. Specifically, the findings emphasize the centrality of open instructional methods in civic education – as opposed to traditional top-down instruction – for promoting intergroup acceptance. As such, the findings speak to the broader literature on how non-content factors in the classroom can foster meaningful changes in students’ political attitudes and behaviors (e.g., Claassen and Monson, 2015; Gainous and Martens, 2012; Miklikowska, Rekker and Kudrnac, 2022). Second, the results emphasize the crucial role of early-life interventions, such as civic education and open classroom discussions, in reducing intergroup prejudice (Paluck et al., 2021). Lastly, the findings offer practical insights for education policymakers working in ethnically divided societies. While many civic education programs are designed with the best intentions to counteract biases against ethnic outgroups from a young age, my findings indicate that their effectiveness is often linked to the extent to which an open classroom climate is integrated into the learning environment.

Theory: Civic Education & Ethnic Tolerance

The core purpose of most civic education programs is to provide students with the foundational knowledge and skills essential for being a ‘good’ citizen in their respective countries (Cogan, Morris and Print, 2002). While the specifics of what qualifies as a ‘good’ citizen differ across countries, there are several overarching themes that tend to be highlighted in civic education curricula globally. Figure 1 presents data from the ICCS 2016 data, where education experts from each of the 24 participating countries indicated whether a specific topic (left plot) or learning goal (right plot) was mentioned in their country’s civic education curriculum. The overall picture comports with conventional understandings of what topics are commonly included in civic education courses, such as imparting knowledge about a country’s political institutions and processes, and inculcating core civic values like fairness.

Among the various themes covered in civic education curricula, human rights stand out as the most frequently cited topic in the ICCS data (left plot in Figure 1). Beyond the ICCS, many countries have made human rights a key cornerstone of their civic education programs in recent decades. An analysis of 465 secondary school social science textbooks from 69 countries found a significant increase in human rights themes since 1970 (Meyer, Bromley and Ramirez, 2010). This is supported by another study, which observed a growing emphasis on rights discourse in textbooks worldwide, including discussions of human rights, the rights of marginalized groups, and citizenship rights (Russell and Tiplic, 2014). For example, in the mid-2000s, the Kenyan government launched a nationwide civic education initiative aimed at cultivating the necessary skills and values to empower citizens to safeguard their political and human rights from potential infringement by the state or societal actors, as well as addressing issues relating to ethnic and religious tension (Finkel, Horowitz and Rojo-Mendoza, 2012). Additionally, Suárez (2007) points out that by 1990, nine countries in Latin America and the Caribbean had incorporated human rights education into their official civics curricula.

Figure 1: Civic Education Topics and Learning Goals from ICCS Countries



Notes: Each bar represents the number of experts (one per country) indicating a specific topic or learning goal was included in their civic education curriculum. The 24 countries that participated in ICCS 2016 were Belgium, Bulgaria, Chile, Colombia, Denmark, Germany, Dominican Republic, Estonia, Finland, Hong Kong, Croatia, Italy, South Korea, Lithuania, Latvia, Mexico, Malta, Netherlands, Norway, Peru, Russia, Slovenia, Sweden, and Taiwan.

It is worth stressing that human rights content in civic education is often framed within the broader context of multiculturalism, a concept that emphasizes the value of including and respecting diverse cultural perspectives within an inclusive setting (Banks, 2007). For instance, a ninth-grade textbook in Costa Rica describes human rights as ‘universal because they belong to all people, without distinguishing between ethnicity, color, sex, language, religion, ..., or any other condition’ (cited in Suárez, 2008). Moreover, Bromley (2011) highlights that in British Columbia, the principles of human rights and multiculturalism have become deeply intertwined with the portrayal and meaning of Canadian national identity in their social science textbooks. Overall, it is conceivable that the inclusion of human rights

themes in civic education would instill in students a more inclusive and tolerant mindset that embraces ethnic diversity as a positive aspect of society.

Another common objective of many civic education programs is to foster feelings of patriotism and a shared national identity among students. If the primary purpose of a country's education system is to cultivate citizens' attachment and loyalty to the nation-state (e.g., Alesina, Giuliano and Reich, 2021; Gellner, 1983; Paglayan, 2022), then civic education can be regarded as the main instrument for achieving this goal. A study analyzing 576 secondary school social science textbooks from 78 countries published between 1955 and 2011 reports the persistence of nationalist narratives in textbooks throughout the study period (Lerch, Russell and Ramirez, 2017). This underscores the enduring strength of nation-building themes in civic education curricula, despite the declining relevance of the nation-state in a highly globalized world. According to the right plot in Figure 1, 16 out of 24 ICCS countries indicated that the goal of 'developing a sense of national identity and allegiance' was explicitly mentioned in their civic education curriculum.

More pertinently, these nation-building themes often convey the idea that a citizen's national identity should be prioritized over other sectarian identities like ethnicity or religion. For example, the new civics textbooks in China stressed the importance of preserving national unity and urged students to actively contribute to 'multi-ethnic harmony' (cited in Cantoni et al., 2017). Likewise, following the genocide in Rwanda, the National Unity and Reconciliation Commission implemented various public programs, including civic education initiatives, to cultivate an all-inclusive Rwandan identity not based on ethnicity (Buckley-Zistel, 2006). Theoretically, the construction of a common national identity through civic education is synonymous with the process of recategorization, where an individual's superordinate national identity supersedes other subordinate identities like ethnicity (Charnysh, Lucas and Singh, 2015; Gaertner et al., 2016). Through this process, students may come to view other ethnic groups not as outgroups, but as part of a common national ingroup, thus improving interethnic trust and tolerance.

Overall, the preceding discussion suggests that the inclusion of human rights and nation-building themes within civic education curricula could plausibly contribute to greater ethnic tolerance among students. First, an explicit focus on human rights discourse in civic education is likely to instill in students a deeper appreciation for respecting and treating all individuals equally, irrespective of their ethnic backgrounds. Second, by nurturing a shared national identity, civic education has the potential to diminish the salience of ethnic identification in favor of one's national identity. This recategorization of various ethnic groups into a more inclusive national ingroup should, in turn, improve intergroup tolerance.

Empirical Track Record

However, despite these theoretical intuitions, the empirical research regarding civic education's impact on ethnic tolerance has yielded mixed and inconclusive findings. Within the limited body of research examining this relationship, some studies report a positive connection between civic education exposure and ethnic tolerance (Finkel, 2003; Finkel and Smith, 2011; Finkel, Horowitz and Rojo-Mendoza, 2012), while others find no significant effects (Cantoni et al., 2017; Denver and Hands, 1990; Langton and Jennings, 1968), or even a negative impact (Lee, 2023).

The mixed findings regarding civic education's impact on ethnic tolerance may be attributed to two factors, both of which stem from the content of civic education itself. The first explanation relates to the lack of direct engagement with ethnic issues within some civic education curricula, despite the inclusion of broader human rights and nation-building themes. In the US, Nelson and Pang (2014, 208) opine that 'the social studies curriculum often does a poor job of examining ... the pervasiveness of racialization in everyday life.' Consequently, many Americans struggle to associate their civic education experiences with ethnic-related matters like systemic racism (Levine and Lopez, 2004). This phenomenon extends beyond the US, with several scholarly evaluations of civics curricula noting a deliberate avoidance of discussing ethnicity in textbooks across multiple countries (Astiz and Mendez,

2006; Fox, 2003; Freedman et al., 2008). In a similar vein, Cantoni et al. (2017) found no evidence that a new civic education curriculum in China improved attitudes towards ethnic minorities. A potential contributing factor to the null finding was that, although there was an increase in frequency of identity-related terms in the new textbooks, they still paled in comparison to the coverage of other topics like governance and political institutions. Above all, there was a noticeable omission of human rights related terms in the new materials.

A second and more pernicious explanation is that some civics textbooks promote a narrower, more exclusive form of national identity based on ethnic heritage or other ascriptive group affiliations. This pattern has been observed in many countries, including Myanmar (Salem-Gervais and Metro, 2012), Turkey (Çayır, 2015), Sri Lanka (Gaul, 2014), and Pakistan (Durrani and Dunne, 2010). In these instances, civic education may reinforce divisive notions of who truly belongs to the nation-state, potentially undermining social cohesion and multicultural understanding. A good example of this phenomenon is reflected in Lee's (2023) research on the effect of Taiwan's revised civic education curriculum on students' attitudes towards immigrants. The study found that students who engaged with the new civic education materials developed stronger anti-immigrant sentiments. This attitudinal shift was linked to the curriculum's heightened focus on a distinct Taiwanese identity, which was defined narrowly in terms of the country's four primary ethnic groups. This demonstrates how civic education, even when intended to strengthen national identity, can inadvertently foster exclusionary views and hinder the development of a more tolerant society.

Despite the mixed results, it should be pointed out that these inconsistencies likely stem from shortcomings within the content of civic education itself. Specifically, the inability of prior research to detect positive effects may be due to the inadequate coverage of ethnic-related topics and/or endorsement of exclusionary notions of national identity in civics curricula. Put differently, civic education may improve ethnic tolerance, but only if its curriculum places a stronger focus on topics related to interethnic relations and advocates for a more inclusive understanding of a country's national identity. These considerations will form the

basis for selecting the case study, which I describe in greater detail in the next section.

Research Design

I conduct two separate studies to test the claim that civic education improves ethnic tolerance. Study 1 investigates the causal effect of an education reform in Singapore, where students born after a specific cutoff date were exposed to a new civic education course, while those born before the cutoff did not. There are several reasons why Singapore serves as an ideal setting to evaluate this claim. Theoretically, the Singapore case represents a unique example in which the new civic education content emphasized the significance of preserving interracial harmony in a diverse society and promoted an inclusive understanding of the country's identity (Ho, 2009; Sim, 2011). As such, this case offers the best opportunity to uncover a positive link between civic education exposure and ethnic tolerance.

Empirically, the Singapore case provides a more robust testing ground due to its distinct educational landscape. The highly centralized nature of the country's education system (Sim, 2011; Tan and Chew, 2004, 2008) implies that the curriculum and instructional methods for the new course were standardized across all schools. This uniformity ensures that those impacted by the reform likely had similar experiences with the new subject. Moreover, the new civic education course, known locally as 'Social Studies,' is compulsory and taught over two years at the upper secondary level (equivalent to grades 9 and 10), culminating in its assessment at the national admission exam for pre-tertiary institutions in Singapore. This mitigates the possibility that any observed null effects between civic education and ethnic tolerance could be explained by a lack of exposure to the new subject.

In Study 2, I analyze cross-national data from the ICCS. This dataset includes responses from students and school administrators regarding their attitudes, perceptions, and activities related to civic education. Importantly, the ICCS collected information from 90,000 students representing 24 countries across Europe, Asia, and the Americas. This diversity therefore lends external validity to the findings presented in this study.

Study 1: Civic Education Reform in Singapore

Singapore is a multi-ethnic country that consists of three main ethnic groups: Chinese (75.9%), Malays (15%), and Indians (7.5%). Since its independence from Malaysia in 1965, the government has implemented various civic education programs to foster intergroup tolerance in a society marked by ethnic, religious, and linguistic diversity (Chew, 1998). However, in the late 1990s, there was a growing concern that many youths lacked knowledge and interest in their country's history and political development (Sim, 2005).

In response, the Ministry of Education introduced Social Studies as a compulsory subject at the upper secondary level (i.e., grades 9–10) in 2001. This marked a significant departure from previous initiatives, as Social Studies was now a mandatory and testable subject at the General Certificate of Education Ordinary Level (GCE O'Level) exam, which is a prerequisite for admission to pre-tertiary schools. All grade 9 (or 15-year-old) students had to study this new subject for a minimum of 2 years, typically with two 35-minute classes per week (Sim, 2005). Given that the academic year in Singapore follows the calendar year, students born on or after January 1, 1986, were required to study Social Studies when it was introduced in 2001, while those born before this date were not. This cutoff was likely sharp, as students had limited ability to manipulate their exposure to the new course. For instance, grade-skipping is rare in Singapore, with only seven children having done so since 2000 (Long, 2013).

One of the primary goals of Social Studies was to cultivate students into empathetic citizens who would participate responsibly in a diverse society and embrace a strong sense of 'shared destiny and national identity' (Ministry of Education, 2003, 4). A qualitative review of the textbooks indicates that interethnic relations and national identity were prominent themes in the early chapters (Curriculum Planning & Development Division [CPDD], 2001; 2002).¹ One chapter provided a detailed account of how political parties in Malaysia sought

¹While the textbooks have undergone multiple revisions since their introduction in 2001 (see Sim, 2011), this study focuses on the content of the first edition, which aligns with my empirical approach centering around the initial cohorts of students impacted by the reform.

to provoke communal violence between the Malay and Chinese communities in Singapore, as well as the importance of preserving racial harmony in light of these historical flare-ups. It stressed that the racial riots ‘showed the danger of communal politics in a multi-racial Singapore,’ and how these tensions ‘resulted in a loss of lives, destruction of property and a breakdown in peace and order’ (CPDD, 2001, 38).

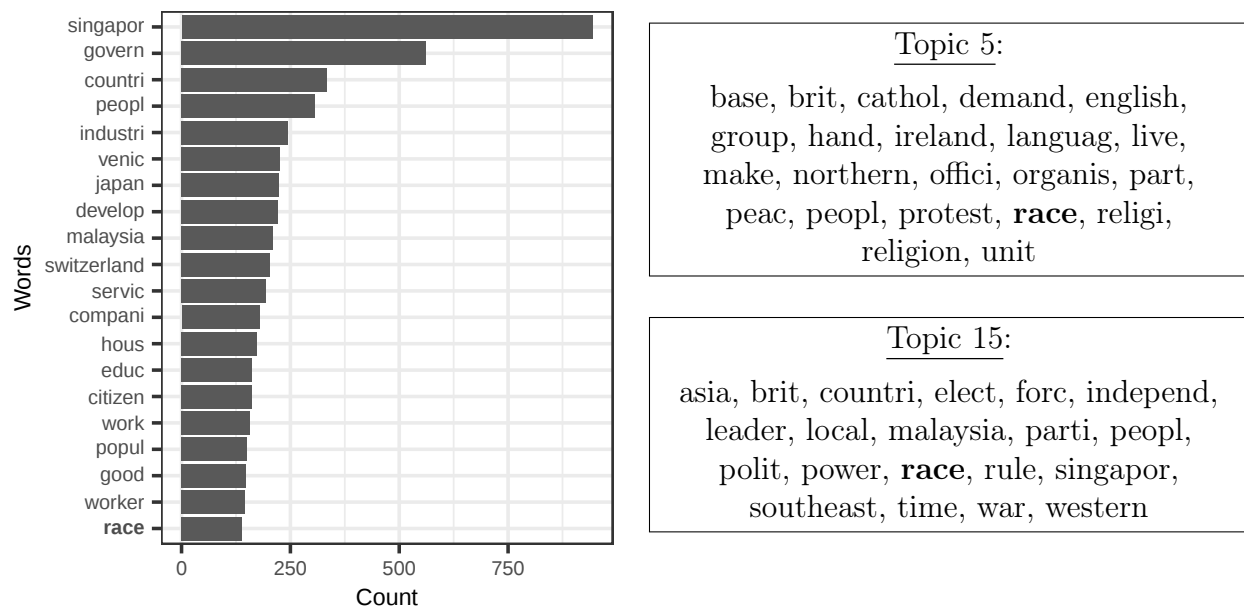
The next two chapters examined intergroup relations in Sri Lanka, Northern Ireland, and Switzerland. The first two countries served as cautionary tales of the dangers of racial and religious discord. For instance, the textbook described how several instances of institutional discrimination against the Tamil minority in Sri Lanka contributed to the emergence of the Liberation Tigers of Tamil Eelam (LTTE) and the country’s prolonged armed struggle. In contrast, Switzerland was presented as a model of interethnic respect that can offer valuable lessons for managing majority-minority relations in Singapore:

The Swiss are very tolerant people. For example, the German-speaking Swiss exercise tolerance and patience towards the minority groups. Likewise, the minority groups are also careful not to be demanding or unreasonable. All groups practice mutual respect and understanding. Singaporeans of different racial and religious groups can also continue to show similar respect and understanding towards each other (CPDD, 2001, 95).

The quantitative text analysis in Figure 2 confirms the qualitative observation that race was a salient theme in the textbooks.² The word ‘race’ appears among the 20 most commonly used words in the Social Studies textbooks (left plot), alongside other terms typically associated with civics-related topics (e.g., ‘government,’ ‘citizen’). To better understand the contexts in which the term ‘race’ was used in the textbooks, I employ a Latent Dirichlet Allocation (LDA) model, an unsupervised text analysis technique, to uncover the main topics (Blei, 2012). I identify the optimal number of topics using metrics developed by Arun et al.

²I use standard text preprocessing conventions, such as stemming (i.e., reducing words to their base or root form). Section OA1a of the Online Appendix (OA) provides details regarding the preprocessing steps.

Figure 2: Descriptive Text Analysis of Social Studies Textbooks



Notes: The figure displays the frequency of the top 20 most common (stemmed) words in the Social Studies textbooks (left plot) and a list of stemmed words that appeared in topics where the word ‘race’ was most prominently featured in the 18-topic model (right plot).

(2010), Cao et al. (2009), and Deveaud, SanJuan and Bellot (2014), which suggest 26, 18, and 8 topics, respectively (Figure OA1a.1). Here, I report findings from the 18-topic model, as it closely aligns with the number of chapters in the textbooks – i.e., 14.³

The 18-topic LDA model reveals that the term ‘race’ is most likely to occur in Topics 5 and 15.⁴ As illustrated in the right panel of Figure 2, which presents the stemmed words for these topics, ‘race’ frequently co-occurred with social terms like ‘live’ and ‘peace’ in Topic 5, and political concepts such as ‘parties’ and ‘power’ in Topic 15. These findings imply that the new textbooks often contextualized intergroup relations, both within Singapore and abroad, in terms of their social and political ramifications. Taken together, the qualitative and quantitative observations suggest that the new civic education curriculum in Singapore sought to foster students’ understanding of the importance of preserving interracial harmony within the country’s social and political landscape.

³Results from the 26- and 8-topic models are described in section OA1a.

⁴Figure OA1a.2 illustrates the probability of the term ‘race’ occurring in each topic across the three topic models. Table OA1a.1 lists the stemmed words present in topics where ‘race’ was particularly prominent.

Empirical Strategy & Findings

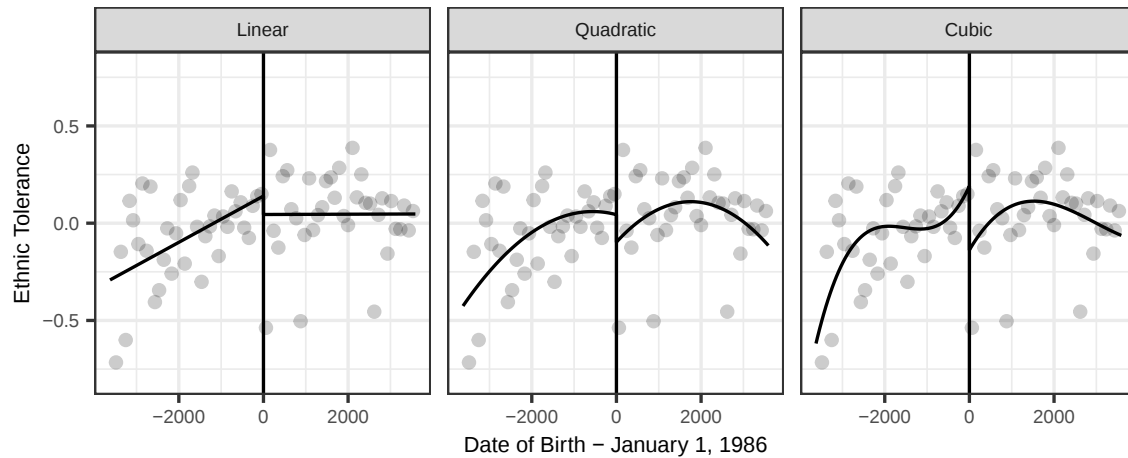
The introduction of Social Studies for all grade 9 students in 2001 means that those born on or after January 1, 1986, would have been exposed to the new subject. This presents an opportunity for a regression discontinuity (RD) design to investigate differences in ethnic tolerance between individuals who were just born into the reform and those who narrowly missed it. To this end, I conducted an observational survey involving 2,000 respondents in November 2022.⁵ The survey was administered in English, as it is spoken by over 96% of the population in Singapore. In order to increase the statistical power of the study, I specifically targeted Singapore citizens born between 1976 and 1995 to ensure a greater proportion of individuals born near the January 1, 1986, cutoff date.

The main outcome variable is *Ethnic Tolerance*. To maintain consistency with the second study, I included the same set of ICCS questions on ethnic tolerance in this survey. Specifically, respondents rated their level of agreement using a 4-point Likert scale on five statements concerning the equitable treatment of different ethnic groups in Singapore: (1) ‘All ethnic groups should have an equal chance to get a good education in Singapore,’ (2) ‘All ethnic groups should have an equal chance to get good jobs in Singapore,’ (3) ‘Schools should teach students to respect members of all ethnic groups in Singapore,’ (4) ‘Members of all ethnic groups should be encouraged to run in elections for political office in Singapore,’ and (5) ‘Members of all ethnic groups should have the same rights and responsibilities.’ The five items yield a Cronbach’s alpha coefficient of 0.63, indicating a moderate level of internal consistency. I factor analyzed the responses to produce a standardized composite variable, *Ethnic Tolerance*, with larger values corresponding to greater ethnic tolerance. Section OA1c describes the variables used in this study and their summary statistics.

Figure 3 illustrates the discontinuity in *Ethnic Tolerance* among the survey participants. The running variable, which is plotted on the horizontal axis, represents the difference in

⁵Section OA1b provides information regarding the sampling design and survey protocols. The survey received approval from the author’s institution’s IRB on October 28, 2022 (IRB ID#202206080).

Figure 3: **Effect of Social Studies on Ethnic Tolerance – RD Plots**



Notes: The plots were created using the `rdrobust` package in R (Calonico, Cattaneo and Titiunik, 2015). The running variable on the horizontal axis measures the difference in the number of days between each respondent's date of birth and January 1, 1986. Negative values indicate births before the cutoff, while positive values indicate births after the cutoff. The gray dots represent the raw data, which are averaged in bins of 100 days.

the number of days between each respondent's date of birth and the reform's cutoff date on January 1, 1986. That is, respondents born before the cutoff (negative values) were not exposed to the new civic education course, while those born after the cutoff (positive values) were treated. The main finding from Figure 3 contradicts the initial expectation that civic education exposure improves intergroup tolerance. Across the linear, quadratic, and cubic polynomial RD plots, there is a noticeable decline in *Ethnic Tolerance* scores when comparing individuals born immediately before and after the January 1, 1986 cutoff.

Next, I estimate the local average treatment effect (LATE) of the Social Studies reform on *Ethnic Tolerance*. The main predictor, *Social Studies*, is a binary predictor that equals one for respondents born on or after January 1, 1986, and 0 otherwise. Table 1 presents the results from three RD models. The 'Linear' model estimates the LATE using a local linear regression with a mean-squared-error (MSE) optimal bandwidth and larger triangular kernel weights assigned to individuals born closer to the cutoff (Calonico, Cattaneo and Titiunik, 2015). The 'Quadratic' and 'Cubic' models use the full sample and allow for varying slopes on either side of the cutoff, with quadratic and cubic polynomials of the

Table 1: **Effect of Social Studies Reform on Ethnic Tolerance – RD Estimates**

DV =	Ethnic Tolerance		
Model =	Linear	Quadratic	Cubic
Social Studies	−0.202 (0.183)	−0.141 (0.135)	−0.329 [†] (0.180)
<i>N</i>	838	1,973	1,973
RD Bandwidth	1417	Full Sample	Full Sample
Kernel Weights	Triangular	Uniform	Uniform

Notes: Table entries are standardized coefficient estimates. The ‘Linear’ model shows bias-corrected estimates obtained using the `rdrobust` package in R. The ‘Quadratic’ and ‘Cubic’ models report coefficients estimated using varying quadratic and cubic slope models, respectively, for the full sample. Robust standard errors are provided in parentheses. Section OA1d describes the model specifications for the quadratic and cubic models, and Table OA1d.4 displays the full regression results. ** $p < 0.01$; * $p < 0.05$; [†] $p < 0.1$.

running variable, respectively. Across all specifications, the coefficient for *Social Studies* is consistently negative, suggesting that exposure to the new civic education course is linked to a reduction in *Ethnic Tolerance*. However, none of the estimates reach conventional levels of statistical significance at $p < 0.05$. Overall, the findings provide no evidence that the civic education reform in Singapore led to any meaningful improvement in *Ethnic Tolerance*.

I perform several additional tests to validate the main findings, the details of which can be found in section OA1d. First, I conduct balance tests on a range of pretreatment covariates, such as respondents’ gender, ethnicity, parental birthplace (whether born in Singapore), educational stream, and attendance at a Chinese-only school. Table OA1d.5 shows no evidence of imbalance across these covariates. Second, an ex-post power analysis using the `rdpower` package in R (Cattaneo, Titiunik and Vazquez-Bare, 2019) yields a statistical power ranging from 0.828 to 0.912 (Table OA1d.6), exceeding the conventional threshold of 0.8 and indicating that the study was sufficiently powered to detect significant differences in ethnic tolerance at the cutoff. Third, I report covariate-adjusted estimates in Table OA1d.7, which account for the pretreatment covariates mentioned earlier. The results remain consistent with the main findings. Next, I conduct two sets of placebo tests by introducing artificial cutoff dates one year before and after the actual January 1, 1986, cutoff. The analysis of these placebo

tests reveals no statistically significant discontinuities in ethnic tolerance at these artificial cutoffs (Tables OA1d.8 and OA1d.9). Finally, I demonstrate that the local linear regression findings are robust to different kernel weights and varying bandwidths (Table OA1d.10).

The findings from the Singapore case cast doubt on the effectiveness of civic education in promoting ethnic tolerance. Despite the new curriculum's explicit emphasis on fostering interracial harmony, the evidence suggests that Social Studies did not significantly improve students' attitudes towards other ethnicities. This discrepancy between policy intentions and observed outcomes is striking and raises important questions. For instance, given that Singapore is an authoritarian regime, one crucial consideration is whether the absence of a positive effect might be related to the political context in which civic education is taught. Alternatively, the results may simply highlight the fact that the tolerance-inducing effect of civic education may not persist indefinitely. The survey sampled respondents who had left school for at least a decade, so it is possible that any positive effects of the new subject had diminished over time. In other words, the findings do not rule out the possibility that civic education might still have a positive short-term effect on ethnic tolerance. The next section addresses these issues by examining civic education's influence on ethnic attitudes among eighth-graders across multiple countries and regime types.

Study 2: Cross-National Evidence from ICCS

The ICCS dataset offers a rich resource for examining the relationship between civic education and ethnic tolerance. It encompasses both student- and school-level data on various civics-related subjects, including teaching methods for civic education and attitudes towards ethnic diversity. Using a stratified two-stage probability design, the ICCS first sampled schools from each of the 24 countries based on their student population size. Subsequently, a full class of eighth-grade students from each school was chosen to participate in the survey. The resulting data contains 90,000 student-level observations from 3,500 schools across 24 countries. In the following paragraphs, I outline the variables used in this study.

The outcome variable in this study is *Ethnic Tolerance*, which is measured using the same approach and items employed in the Singapore case study.⁶ I construct the composite variable by performing factor analysis on students' responses to the five statements. The resulting scores are then standardized to have a mean of zero and a standard deviation of one. The high Cronbach's alpha coefficient of 0.85 indicates that the five items used to create *Ethnic Tolerance* exhibit a strong level of internal consistency.

Given that the previous discussion has primarily focused on classroom-based civic education and its impact on ethnic tolerance, the main predictor in the analysis is *Civic Education (Classroom)*. This variable equals one if a student attends a school where civic education is either taught as a standalone subject or incorporated into other humanities or social science subjects (such as social studies and history), and zero otherwise. This coding scheme is appropriate, since previous research has established that civic education is typically delivered through one of these two instructional methods in the classroom (see Niemi and Junn, 1998, Chapter 4).⁷ To capture the diversity in which civic education is taught in schools, I also code two other variables. *Civic Education (Extracurricular)* equals one if a student's school provides civic education through extracurricular activities such as debating groups or political clubs. Additionally, *Civic Education (Experience)* is a binary variable that considers whether civic education content is integrated into all aspects of a student's school experience.

The regression models also include a range of covariates at the student and school levels. The first set of covariates relates to students' demographic characteristics: *Female* is a binary variable that equals one if the student is female, and *Student (Native)* equals one if the student was born in the country where the survey was administered. The second set of covariates represents a student's parental background, with *Mother (Native)* and *Father (Native)* being binary variables indicating whether the student's parents were born in the country of test, and *Mother (Education)* and *Father (Education)* representing the highest

⁶See section OA2a for a detailed description and summary statistics of the key variables.

⁷The ICCS also measured a third type of civic education in the classroom – the integration of civics content across all subjects in a school. However, this measure is not included in *Civic Education (Classroom)* due to potential differences in the depth and focus of civics content compared to the other two teaching methods.

level of education attained by each parent. The third set of covariates focuses on students' experiences within and outside of school, such as their experience of bullying (*Bully*), expected educational achievement (*Education*), participation in activities of at least one *Civic Organization*, and perception of *Classroom Openness*, the last of which is a composite measure based on six items that asked students' opinions regarding the dynamics of classroom discussion on political and social issues.⁸ Next, the models include covariates measuring the degree of social tension in the school's vicinity, including the salience of intergroup conflicts in the neighborhood (*Tension (Intergroup)*), the prevalence of poverty and unemployment in the area (*Tension (Poor)*), and the frequency of criminal activities (*Tension (Crime)*). Finally, the models control for school type, with *Private School* being a binary variable indicating whether a student's school is private or public.

Empirical Strategy & Findings

I employ two sets of regression models for my empirical analyses. The first set of models involves the use of multilevel regression to investigate the association between civic education and ethnic tolerance. This approach takes into account the hierarchical structure of the data, where students are nested within schools, and schools within the 24 ICCS countries. I also implement a series of ordinary least squares (OLS) models with country fixed effects to assess the consistency of the findings. Given the manner in which schools and students were sampled in the ICCS, I compute robust standard errors clustered at the school level for the OLS models. Finally, I include student-level weights in both the multilevel and OLS models. These weights are necessary for the estimation strategy, as they account for varying selection probabilities in the sample and adjust for potential bias resulting from non-participation of the sampled units (see Schulz et al., 2018).

Table 2 displays the regression results. The first and second columns assess the effects of the three civic education teaching methods on *Ethnic Tolerance*. While two of the three

⁸I describe the items that make up *Classroom Openness* in greater detail in the section titled, 'Revisiting Study 2: Moderating Impact of Open Classrooms.'

Table 2: Effect of Civic Education on Ethnic Tolerance – ICCS Data

DV =	Ethnic Tolerance			
Model =	OLS	Multilevel	OLS	Multilevel
Civic Education (Classroom)	0.044 (0.029)	0.027 (0.022)		
Civic Education (Standalone)			0.012 (0.018)	−0.002 (0.014)
Civic Education (Social)			−0.007 (0.020)	−0.010 (0.016)
Civic Education (Extracurricular)	0.019 (0.022)	0.016 (0.016)	0.018 (0.022)	0.016 (0.016)
Civic Education (Experience)	−0.003 (0.017)	−0.001 (0.014)	−0.001 (0.018)	−0.0001 (0.014)
<i>N</i>	69,863	69,863	69,808	69,808
Covariates	Yes	Yes	Yes	Yes
Country FE	Yes	No	Yes	No

Notes: Table entries are standardized coefficient estimates. The first and third columns report robust standard errors clustered at the school level in parentheses. The second and fourth columns display conventional standard errors. The models incorporate several control variables: gender, student’s nativity status, parental birthplace and education level, student’s experience with bullying, expected educational achievement, perception of open classroom discussions, participation in civic organizations, neighborhood social tensions, and school type (private or public). Full results are reported in Table OA2b.13. ** $p < 0.01$; * $p < 0.05$; † $p < 0.1$.

methods show a positive association with *Ethnic Tolerance*, none of the estimates are statistically significant at $p < 0.05$. As an additional check, I disaggregate the main predictor, *Civic Education (Classroom)*, into its constituent parts: *Civic Education (Standalone)*, which denotes whether civic education is taught as a separate subject, and *Civic Education (Social)*, which indicates whether civic education is integrated into social science subjects. The results of this analysis, which are presented in the third and fourth columns, remain consistent with the initial findings. Overall, the evidence presented in Table 2 suggests that civic education exposure does not have a significant short-term positive effect on students’ ethnic tolerance. Interestingly, these findings are also consistent with those from the Singapore case study, further casting doubt on the efficacy of civic education programs in fostering significant improvements in students’ interethnic attitudes.

I conduct three additional tests to verify the robustness of the findings. The first test addresses the potential concern of multicollinearity by plotting the Variance Inflation factors (VIF) for the main predictor and covariates in Figure OA2b.4. All VIF scores are well below the standard cutoff of 5, which suggests that the results are not significantly distorted by multicollinearity. The second test involves a series of country-level replications of the regression models, omitting country fixed effects but retaining the same set of covariates. Figure OA2b.5 illustrates the country-specific estimates for *Civic Education (Classroom)*. Only Lithuania shows a statistically significant association in both the OLS and multilevel models; however, the coefficients are negative, thus contradicting the initial expectation that civic education improves ethnic tolerance. For all other countries, I observe a consistent pattern of null effects, and this holds across both democratic and nondemocratic regimes. This further bolsters our confidence that the null results are not an artifact of the political system. The final test explores whether the null results persist across the individual items that make up the composite outcome, *Ethnic Tolerance*. I regress each item on the same set of variables, with the estimates for *Civic Education (Classroom)* presented in Figure OA2b.6. None of the estimates is statistically significant, which reinforces the robustness of the overall null finding regarding the impact of civic education on students' ethnic attitudes.

Beyond Civic Education Content: The Role of Open Classrooms

The findings from Studies 1 and 2 are consistently puzzling. In Singapore, where the civic education curriculum strongly emphasized the values of interracial harmony and a shared national identity, a positive impact on ethnic tolerance would be expected. However, the new course did not lead to any significant improvement in this regard. Even more perplexing is the fact that the null findings from Study 1 are mirrored in Study 2, which extends across multiple countries with different regime types. Additionally, civic education does not appear to have any short or long term effect on ethnic tolerance. These findings suggest that the content of civic education alone may be insufficient to change individual attitudes towards

other ethnic groups. Instead, it may be more fruitful to examine how non-content factors could enhance the effectiveness of civic education in fostering ethnic tolerance.

One promising non-content factor is an open classroom environment, which is defined as a space where ‘students experience their classrooms as places to investigate issues and explore their opinions and those of their peers’ (Torney-Purta et al., 2001, 137). Previous research has identified two features that characterize such environments. First, open classrooms are characterized by an openness in content, in which students and teachers can introduce and deliberate on issues not covered in the curriculum. Second, these classrooms are also open to diverse viewpoints, where teachers present varied perspectives on contentious issues while students are free to offer contrasting opinions on those topics (see Campbell, 2008; Miklikowska, Rekker and Kudrnac, 2022; Persson, 2015; Weiss, Ran and Halperin, 2023).

Regarding the first feature, an open classroom environment may complement civic education by encouraging students to explore ideas and experiences beyond the confines of their textbooks. In terms of ethnic tolerance, this approach may provide students with many opportunities to reflect on and gain new insights into the multifaceted nature of ethnic discrimination in their daily lives (Miklikowska, Rekker and Kudrnac, 2022; Weiss, Ran and Halperin, 2023). As one student who participated in an open classroom initiative remarked, the process of deliberation with other students ‘helped me open my mind more about all sorts of issues’ (cited in Avery, Levy and Simmons, 2013, 111). Moreover, openness in content enables students to revisit and discuss civics-related topics with their peers, facilitating a deeper internalization of the content and the application of civic values such as mutual respect during their conversations. Indeed, open classrooms have been linked to increased civic knowledge among students, encompassing topics both within and beyond the standard civic education curricula (Campbell, 2008; Persson, 2015).

The second aspect of open classrooms – i.e., openness towards diverse viewpoints – may also amplify the positive influence of civic education on ethnic tolerance. In addition to teaching students how to amicably resolve conflicts stemming from different political opinions

(Campbell, 2008; Torney-Purta et al., 2001), this feature may cultivate a deeper appreciation that people can hold multiple perspectives on the same topic. As such, an open classroom environment may enhance students' cognitive capacity to consider the perspectives of others, which, in turn, should lead to increased levels of acceptance towards members of ethnic outgroups. This conjecture is corroborated by several experimental studies, which found that classroom deliberations on contentious public issues led to increased levels of perspective-taking among students (e.g., Avery, Levy and Simmons, 2013, 2014; Weiss, Ran and Halperin, 2023; Wen et al., 2023). For example, one study reported that students exposed to an open classroom setting and who did not believe their school should mandate school uniforms were more likely to provide more reasons why someone might *support* such a policy (Avery, Levy and Simmons, 2014). This suggests that open classrooms can foster empathy even when students may disagree on certain issues.

Overall, the two mechanisms suggest that an open classroom climate should exert a positive moderating effect on the relationship between civic education and ethnic tolerance, by (1) expanding students' knowledge and internalization of civics-related topics and principles, and (2) improving perspective-taking among students. Hence, civic education should be most effective in promoting ethnic tolerance when it is taught in an open and inclusive setting. Conversely, the impact of civic education on ethnic tolerance should be negligible in more restrictive classroom environments that do not encourage open dialogue and diverse perspectives. The following two sections explore how the presence or absence of an open classroom setting shapes the effectiveness of civic education by drawing on previous qualitative research on the Singapore case study and reanalyzing the ICCS data.

Revisiting Study 1: Civic Education in a Restrictive Learning Environment

Although there is no direct evidence linking the absence of an open classroom climate to the null findings in Study 1, several observers note that the manner in which Social Studies was taught in Singapore did not align with the two key features as described above (Ho, 2010;

Sim, 2005). In terms of openness in content, teachers frequently prioritize content delivery and ‘teaching to the test’ over allocating time for classroom discussion on topics not included in the syllabus. This hesitation to engage in open discussions can be attributed, in part, to the high-stakes nature of the subject, as students are required to pass Social Studies in the GCE O’level examination to progress and secure admission to pre-tertiary institutions in Singapore. For example, Ho (2010, 238) notes that many Social Studies teachers in their study ‘constantly reiterated the requirements of the ‘O’ level examinations during the lessons.’ This emphasis on exam preparation led one student to comment that they were ‘not quite interested in social studies because of the exams’ (cited in Ho, 2010, 238).

The lack of openness in content was also evident in the limited application of the case studies to examine their relevance in the Singapore context. For example, although the teachers in their study devoted significant attention towards describing instances of structural and institutional discrimination against Tamils in Sri Lanka and Catholics in Northern Ireland, Ho (2010) reports that none of them encouraged students to reflect on whether similar forms of institutional privilege or racism might exist in Singapore. As a result, none of the interviewed students felt that there was a need to consider institutional or systemic causes of racial inequality in Singapore (Ho, 2010), despite the persistence of institutional and subtle racism in the country, such as discriminatory hiring practices and ethnic stereotyping in the media (e.g., Chew, Young and Tan, 2019; Velayutham, 2017).

Moreover, both teachers and students often refrained from discussing various alternative perspectives when addressing ethnic-related topics found in the textbooks. The following exchange, as recounted in Ho (2010, 236), best exemplifies the reticence among students to participate in discussions on controversial political issues:

Teacher: Why are the Sinhalese and Tamils in conflict?

Students: (silence)

Teacher: How many of you think that there is genuine cooperation among races in Singapore? How many think that we are faking it? Don’t worry, I’m not going

to report you.

Students: [laughter]

More generally, this reluctance to initiate open classroom discussions among students and teachers stems from a deep-seated fear of broaching topics deemed too sensitive or potentially disruptive to societal order. It also reflects the widespread recognition that expressing controversial opinions may lead to negative repercussions for those who speak out (Baildon and Sim, 2009; Chua and Sim, 2015; Ho et al., 2017). One teacher jokingly remarked, ‘[W]e don’t want a racial riot to break out from such debates during social studies lessons’ (cited in Baildon and Sim, 2009, 417). This highlights the general concern about the potential consequences of engaging in open discussions on sensitive topics.

Taken together, the teaching of Social Studies in Singapore can be described as a distinctive blend of delivering ethnically salient content within a constrained learning environment. Although the curriculum stressed the importance of maintaining intergroup harmony in Singapore, classroom discussions on controversial ethnic-related issues and dissenting opinions were discouraged. Importantly, the above anecdotal accounts suggest that the lack of openness in content and the limited exposure to diverse perspectives may have contributed to the ineffectiveness of Social Studies in promoting greater ethnic tolerance in Singapore.

Revisiting Study 2: Moderating Impact of Open Classrooms

To conduct a quantitative test of the moderating effect of open classrooms, I reanalyze the ICCS data using six items to measure the level of *Classroom Openness*.⁹ These items capture the two key features of open classrooms: (1) openness in content and (2) openness towards diverse viewpoints. Regarding the first feature, the ICCS asked students about the frequency with which they had the opportunity to initiate discussions on current political events in the classroom. For the second feature, students were asked to assess how often teachers encouraged them to engage in conversations with peers holding different viewpoints, whether

⁹This variable was included as a control in Study 2.

they felt free to express their personal opinions even when they differed from the majority, and how frequently teachers presented multiple perspectives on an issue. The responses to these items are factor analyzed to create a standardized composite variable (Cronbach's $\alpha = 0.79$), with higher values indicating greater *Classroom Openness*. Notably, this variable provides a broad measure of students' perceptions of the openness of classroom discussions, regardless of whether *Civic Education (Classroom)* was included in the school's curriculum. In fact, among students who did not receive any classroom-based civic education, 52% reported above-average levels of open classroom discussions.

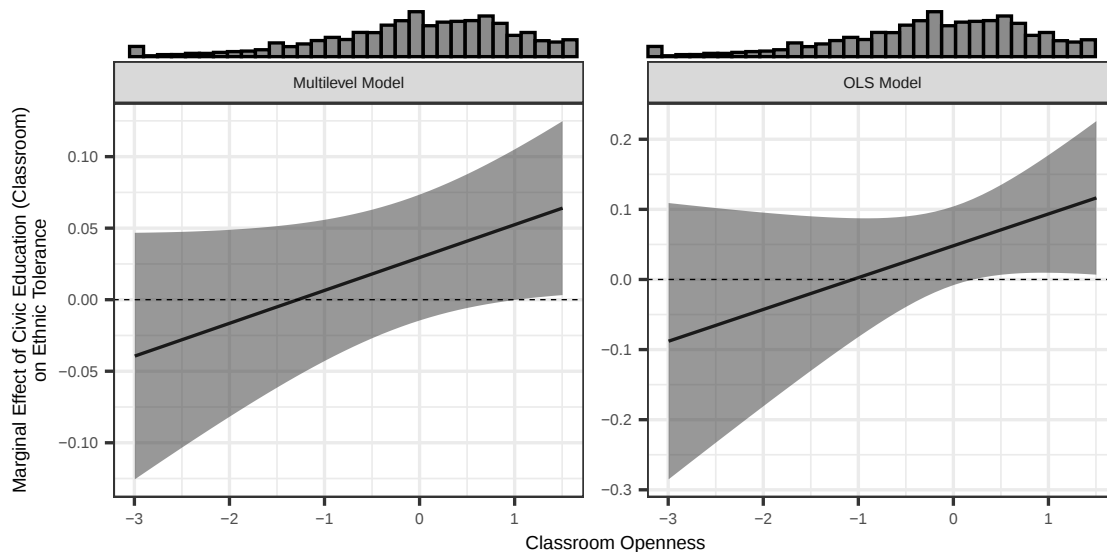
Empirically, I interact *Civic Education (Classroom)* with *Classroom Openness* and plot the conditional marginal effects of the main predictor in Figure 4.¹⁰ Among students who report low levels of open classroom discussions, the effect of classroom-based civic education on ethnic tolerance is negligible, which is consistent with the patterns observed earlier. However, as *Classroom Openness* increases, the positive impact of classroom-based civic education becomes more pronounced. At the highest level of *Classroom Openness* (or about 1.5 SD above mean), *Civic Education (Classroom)* has a positive and statistically significant effect on students' *Ethnic Tolerance* in both the OLS model ($\beta = 0.12$ SD, $p = 0.037$) and the multilevel model ($\beta = 0.06$ SD, $p = 0.039$). Furthermore, the main findings remain unchanged even when the main predictor is interacted with school-level averages of *Classroom Openness* (Figure OA2c.7).¹¹

To put this effect size into context, consider the ICCS item asking students whether they agree with the statement, 'Members of all ethnic groups should be encouraged to run in elections for political office.' The standard deviation of students' responses to this item is 0.8. This implies that, at the highest level of *Classroom Openness*, classroom-based civic education would lead to a modest increase of about 0.05-0.10 in responses to this item on a 4-point Likert scale. It should be highlighted that the mean response to this item was already

¹⁰The OLS and multilevel regression results are displayed in Table OA2c.14.

¹¹This test accounts for the possibility that each student's perception of classroom openness might be influenced by other unobserved factors, such as their personalities and readiness to express their views.

Figure 4: Marginal Effects of Civic Education on Ethnic Tolerance, Conditional on Classroom Openness



Notes: The figure presents the marginal effects of *Civic Education (Classroom)* on *Ethnic Tolerance* at various levels of *Classroom Openness*, together with their 95% confidence intervals. The effect sizes and statistical significance for the left and right plots are computed from Table OA2c.14. The vertical bars reflect the frequency distribution of students' perceived *Classroom Openness*. The models incorporate several control variables: gender, student's nativity status, parental birthplace and education level, student's experience with bullying, expected educational achievement, participation in civic organizations, neighborhood social tensions, and school type (private or public).

high, at 3.08 out of a maximum of 4, thus indicating a potential ceiling effect. Despite this, the fact that we can still detect a statistically significant difference underscores the crucial role of open classroom instruction in generating a positive moderating influence on the relationship between civic education and ethnic tolerance.

Lastly, I examine whether the observed patterns stem from changes in students' civic knowledge and perspective-taking ability. Specifically, an open classroom climate may enhance civic education's effectiveness in promoting ethnic tolerance by facilitating students' internalization of the content and values covered in civics textbooks and improving their perspective-taking ability. If so, open classrooms should also exert a positive moderating influence on civic knowledge and perspective-taking ability. I employ two separate measures to test the proposed mechanisms. *Civic Knowledge* is measured using an ICCS composite index

derived from a test of students' understanding of various civic domains. *Perspective-Taking* is based on a 4-point Likert scale question assessing students' views on the importance of 'respecting the rights of others to have their own opinions.'¹² I then conduct a regression analysis to examine how the interaction between civic education and classroom openness affects these measures. The results provide some support for the two mechanisms. Although there is no apparent moderating effect on perspective-taking (Figure OA2c.9),¹³ the findings reveal a similar pattern for civic knowledge, where a positive and statistically significant association between this outcome and *Civic Education (Classroom)* is observed exclusively among students who perceive higher levels of *Classroom Openness* (Figure OA2c.8).

Overall, the evidence from a reanalysis of the ICCS data supports the revised claim that positions classroom openness as a critical moderating factor in the relationship between civic education and ethnic tolerance. Although the findings presented here are exploratory and correlational, they nonetheless signal the promise of open classrooms in civic education teaching. As such, future research should undertake more rigorous experimental designs to provide a more definitive understanding of how civic education content and classroom openness work together to foster ethnic tolerance in both the short and long term.

Conclusion

This article offers a nuanced perspective on the connection between civic education and ethnic attitudes across two studies. In Study 1, I examine an education reform in Singapore that quasi-randomly assigned students to a new civic education course. Despite its strong emphasis on promoting ethnic cohesion, the evidence indicates that the introduction of this new course did not improve ethnic tolerance among students exposed to it. Study 2 corroborates these findings through a cross-national analysis of the ICCS data, revealing a

¹²A detailed description of the measurements for civic knowledge and perspective-taking is provided in Table OA2a.11 and their summary statistics is reported in Table OA2a.12.

¹³This discrepancy may be due to the limitations of the perspective-taking measure from the ICCS data, which, unlike other indices such as the Interpersonal Reactivity index (IRI), may not directly assess students' ability to take the perspectives of others. Hence, this finding should be interpreted with caution.

consistent pattern of null effects between civic education and ethnic tolerance across multiple countries. To understand the factors influencing civic education's effectiveness in promoting ethnic tolerance, I explore the role of open classrooms. This investigation is motivated by existing qualitative research suggesting that the restrictive nature of Social Studies classes in Singapore may explain the null findings in Study 1. Revisiting the ICCS data with this perspective, I find that civic education is positively associated with ethnic tolerance primarily among students who perceive high levels of classroom openness. In contrast, civic education did not improve ethnic tolerance among students who experienced closed learning environments. Taken together, the results shed light on the importance of integrating open and inclusive discussions into the classroom environment to enhance the positive effects of civic education on ethnic tolerance.

This paper makes three important contributions. First, it identifies the specific conditions necessary for civic education programs to effectively reduce intolerance towards ethnic outgroups. The key insight of this article is that merely including ethnically inclusive content in civics curriculum is insufficient to generate substantial changes in attitudes and behaviors towards other ethnicities. To maximize their impact, these programs must be complemented by participatory methods that encourage open discussions and diverse opinions. More broadly, the results underscore the importance of examining how various aspects of the civic education experience can foster more tolerant mindsets. These include pedagogy, teacher quality, testing requirements and structure, classroom diversity, and so on. Future research should focus on how each of these elements can enhance or diminish the effectiveness of civic education in improving a range of political and social outcomes. As Finkel, Horowitz and Rojo-Mendoza (2012, 63-64) aptly note, 'changing core democratic values requires frequent, focused training with active, participating teaching methodologies and with high-quality instruction.'

Second, this article emphasizes the potential of civic education and open classrooms as early-life interventions to reduce prejudice. Considering the mixed or short-lived results of many proposed interventions aimed at mitigating intergroup prejudice, it is sensible to

focus on education or other early life interventions, such as parental socialization, to cultivate greater ethnic tolerance from a young age. This focus is particularly crucial because political attitudes and social dispositions are deeply rooted during childhood and tend to be resistant to change in adulthood (Sears and Funk, 1999; Tesler, 2015).

Finally, the findings from this research have significant implications for education policy-makers and practitioners. While the idea of promoting an open classroom climate to enhance ethnic tolerance is not new, the results place particular emphasis on the vital role of such an environment within the context of civic education. They underscore that civic education cannot fully achieve its goal of improving ethnic tolerance among today's youths without the incorporation of open classroom discussions. This insight highlights the importance of creating an inclusive and open learning environment to effectively implement civic education programs and achieve their desired outcomes.

References

- Alesina, Alberto, Paola Giuliano and Bryony Reich. 2021. “Nation-Building and Education.” *The Economic Journal* 131(638):2273–2303.
- Arun, R., V. Suresh, C. E. Veni Madhavan and M. N. Narasimha Murthy. 2010. On Finding the Natural Number of Topics with Latent Dirichlet Allocation: Some Observations. In *Advances in Knowledge Discovery and Data Mining*, ed. Mohammed J. Zaki, Jeffrey Xu Yu, B. Ravindran and Vikram Pudi. Berlin, Heidelberg: Springer pp. 391–402.
- Astiz, M. Fernanda and Gabriela Mendez. 2006. “Education for Citizenship: The Argentine Case in Comparison.” *Education, Citizenship and Social Justice* 1(2):175–200.
- Avery, Patricia G., Sara A. Levy and Annette M. M. Simmons. 2013. “Deliberating Controversial Public Issues As Part of Civic Education.” *The Social Studies* 104(3):105–114.
- Avery, Patricia G., Sara A. Levy and Annette M. M. Simmons. 2014. “Secondary Students and the Deliberation of Public Issues.” *PS: Political Science & Politics* 47(4):849–854.
- Baildon, Mark C. and Jasmine B.-Y. Sim. 2009. “Notions of Criticality: Singaporean Teachers’ Perspectives of Critical Thinking in Social Studies.” *Cambridge Journal of Education* 39(4):407–422.
- Banks, James A. 2007. *Educating Citizens in a Multicultural Society*. Second ed. New York: Teachers College Press.
- Blair, Harry. 2003. “Jump-Starting Democracy: Adult Civic Education and Democratic Participation in Three Countries.” *Democratization* 10(1):53–76.
- Blei, David M. 2012. “Probabilistic Topic Models.” *Communications of the ACM* 55(4):77–84.
- Bromley, Patricia. 2011. “Multiculturalism and Human Rights in Civic Education: The Case of British Columbia, Canada.” *Educational Research* 53(2):151–164.

- Buckley-Zistel, Susanne. 2006. "Dividing and Uniting: The Use of Citizenship Discourses in Conflict and Reconciliation in Rwanda." *Global Society* 20(1):101–113.
- Calonico, Sebastian, Matias D. Cattaneo and Rocio Titiunik. 2015. "rdrobust: An R Package for Robust Nonparametric Inference in Regression-Discontinuity Design." *The R Journal* 7(1):38–51.
- Campbell, David E. 2008. "Voice in the Classroom: How an Open Classroom Climate Fosters Political Engagement Among Adolescents." *Political Behavior* 30(4):437–454.
- Campbell, David E. and Richard G. Niemi. 2016. "Testing Civics: State-Level Civic Education Requirements and Political Knowledge." *American Political Science Review* 110(3):495–511.
- Cantoni, Davide, Yuyu Chen, David Y. Yang, Noam Yuchtman and Y. Jane Zhang. 2017. "Curriculum and Ideology." *Journal of Political Economy* 125(2):338–392.
- Cao, Juan, Tian Xia, Jintao Li, Yongdong Zhang and Sheng Tang. 2009. "A Density-Based Method for Adaptive LDA Model Selection." *Neurocomputing* 72(7):1775–1781.
- Cattaneo, Matias D., Rocío Titiunik and Gonzalo Vazquez-Bare. 2019. "Power Calculations for Regression-Discontinuity Designs." *The Stata Journal* 19(1):210–245.
- Charnysh, Volha, Christopher Lucas and Prerna Singh. 2015. "The Ties That Bind: National Identity Salience and Pro-Social Behavior Toward the Ethnic Other." *Comparative Political Studies* 48(3):267–300.
- Chew, Joy Oon Ai. 1998. "Civics and Moral Education in Singapore: Lessons for Citizenship Education?" *Journal of Moral Education* 27(4):505–524.
- Chew, Peter K. H., Jessica L. Young and Gerald P. K. Tan. 2019. "Racism and the Pinkerton Syndrome in Singapore: Effects of Race on Hiring Decisions." *Journal of Pacific Rim Psychology* 13:e16.

- Chua, Shuyi and Jasmine B.-Y. Sim. 2015. "Crossing Boundaries: An Exploration of How Three Social Studies Teachers Understand and Teach Patriotism in Singapore." *Citizenship Teaching & Learning* 10(3):79–93.
- Claassen, Ryan L. and J. Quin Monson. 2015. "Does Civic Education Matter?: The Power of Long-Term Observation and the Experimental Method." *Journal of Political Science Education* 11(4):404–421.
- Cogan, John J., Paul Morris and Murray Print. 2002. Civic Education in the Asia-Pacific Region: An Introduction. In *Civic Education in the Asia-Pacific Region: Case Studies Across Six Societies*, ed. John J. Cogan and Murray Print. New York: Routledge.
- Curriculum Planning and Development Division MOE. 2001. *Upper Secondary Social Studies Secondary 3*. Singapore: Pearson Education Asia.
- Curriculum Planning and Development Division MOE. 2002. *Upper Secondary Social Studies Secondary 4*. Singapore: Pearson Education Asia.
- Denver, David and Gordon Hands. 1990. "Does Studying Politics Make a Difference? The Political Knowledge, Attitudes and Perceptions of School Students." *British Journal of Political Science* 20(2):263–279.
- Deveaud, Romain, Eric SanJuan and Patrice Bellot. 2014. "Accurate and Effective Latent Concept Modeling For Ad Hoc Information Retrieval." *Document numérique* 17(1):61–84.
- Durrani, Naureen and Máiréad Dunne. 2010. "Curriculum and National Identity: Exploring the Links Between Religion and Nation in Pakistan." *Journal of Curriculum Studies* 42(2):215–240.
- Finkel, Steven E. 2003. "Can Democracy Be Taught?" *Journal of Democracy* 14(4):137–151.
- Finkel, Steven E. and Amy Erica Smith. 2011. "Civic Education, Political Discussion, and

- the Social Transmission of Democratic Knowledge and Values in a New Democracy: Kenya 2002.” *American Journal of Political Science* 55(2):417–435.
- Finkel, Steven E., Anja Neundorff and Ericka Rascón-Ramírez. 2023. “Can Online Civic Education Induce Democratic Citizenship? Experimental Evidence from a New Democracy.” *American Journal of Political Science* . Forthcoming.
URL: <https://onlinelibrary.wiley.com/doi/abs/10.1111/ajps.12765>
- Finkel, Steven E., Jeremy Horowitz and Reynaldo T. Rojo-Mendoza. 2012. “Civic Education and Democratic Backsliding in the Wake of Kenya’s Post-2007 Election Violence.” *The Journal of Politics* 74(1):52–65.
- Fox, Christine. 2003. “No Place for Girls? Gender, Ethnicity and Citizenship Education in the Lao People’s Democratic Republic.” *Compare: A Journal of Comparative and International Education* 33(3):401–412.
- Freedman, Sarah Warshauer, Harvey M. Weinstein, Karen Murphy and Timothy Longman. 2008. “Teaching History after Identity-Based Conflicts: The Rwanda Experience.” *Comparative Education Review* 52(4):663–690.
- Gaertner, Samuel L., John F. Dovidio, Rita Guerra, Eric Hehman and Tamar Saguy. 2016. A Common Ingroup Identity: Categorization, Identity, and Intergroup Relations. In *Handbook of Prejudice, Stereotyping, and Discrimination*. New York: Psychology Press pp. 433–454.
- Gainous, Jason and Allison M. Martens. 2012. “The Effectiveness of Civic Education: Are “Good” Teachers Actually Good for “All” Students?” *American Politics Research* 40(2):232–266.
- Galston, William A. 2001. “Political Knowledge, Political Engagement, and Civic Education.” *Annual Review of Political Science* 4(1):217–234.

- Gaul, Anne. 2014. "Where Are the Minorities? The Elusiveness of Multiculturalism and Positive Recognition in Sri Lankan History Textbooks." *Journal of Educational Media, Memory, and Society* 6(2):87–105.
- Gellner, Ernest. 1983. *Nations and Nationalism*. Ithaca, NY: Cornell University Press.
- Gottlieb, Jessica. 2016. "Why Might Information Exacerbate the Gender Gap in Civic Participation? Evidence from Mali." *World Development* 86:95–110.
- Ho, Li-Ching. 2009. "Global Multicultural Citizenship Education: A Singapore Experience." *The Social Studies* 100(6):285–293.
- Ho, Li-Ching. 2010. "'Don't Worry, I'm Not Going to Report You': Education for Citizenship in Singapore." *Theory & Research in Social Education* 38(2):217–247.
- Ho, Li-Ching, Paula McAvoy, Diana Hess and Brian Gibbs. 2017. Teaching and Learning about Controversial Issues and Topics in the Social Studies. In *The Wiley Handbook of Social Studies Research*. John Wiley & Sons, Ltd pp. 319–335.
- Janmaat, Jan Germen. 2012. "The Effect of Classroom Diversity on Tolerance and Participation in England, Sweden and Germany." *Journal of Ethnic and Migration Studies* 38(1):21–39.
- Langton, Kenneth P. and M. Kent Jennings. 1968. "Political Socialization and the High School Civics Curriculum in the United States." *American Political Science Review* 62(3):852–867.
- Lee, Boyoon. 2023. "Educational Content, Exclusive National Identity, and Anti-immigrant Attitudes." *The Journal of Politics* 85(4):1182–1197.
- Lerch, Julia C., S. Garnett Russell and Francisco O. Ramirez. 2017. "Wither the Nation-State? A Comparative Analysis of Nationalism in Textbooks." *Social Forces* 96(1):153–180.

- Levine, Peter and Mark Hugo Lopez. 2004. *Themes Emphasized in Social Studies and Civics Classes: New Evidence*. Boston, MA: Center for Information and Research on Civic Learning and Engagement.
- Levinson, Meira. 2012. *No Citizen Left Behind*. Cambridge: Harvard University Press.
- Long, Susan. 2013. “Giving Bright Kids a Head Start.” *The Straits Times* .
URL: <https://www.straitstimes.com/singapore/giving-bright-kids-a-head-start>
- Martens, Allison M. and Jason Gainous. 2013. “Civic Education and Democratic Capacity: How Do Teachers Teach and What Works?” *Social Science Quarterly* 94(4):956–976.
- McAvoy, Paula and Diana Hess. 2013. “Classroom Deliberation in an Era of Political Polarization.” *Curriculum Inquiry* 43(1):14–47.
- Meyer, John W., Patricia Bromley and Francisco O. Ramirez. 2010. “Human Rights in Social Science Textbooks: Cross-national Analyses, 1970–2008.” *Sociology of Education* 83(2):111–134.
- Miklikowska, Marta, Roderik Rekker and Ales Kudrnac. 2022. “A Little More Conversation A Little Less Prejudice: The Role of Classroom Political Discussions for Youth’s Attitudes toward Immigrants.” *Political Communication* 39(3):405–427.
- Ministry of Education. 2003. *2190 The Combined Humanities Subject (O Level)*. Singapore: Ministry of Education.
- Nelsen, Matthew D. 2021. “Cultivating Youth Engagement: Race & the Behavioral Effects of Critical Pedagogy.” *Political Behavior* 43(2):751–784.
- Nelsen, Matthew D. 2023. “Lessons in Empowerment: The Civic Potential of Historically Grounded Conversations among Racially Marginalized Youth.” *The ANNALS of the American Academy of Political and Social Science* 705(1):174–191.

- Nelson, Jack L. and Valerie Ooka Pang. 2014. Prejudice, Racism, and the Social Studies Curriculum. In *The Social Studies Curriculum: Purposes, Problems, And Possibilities*, ed. E. Wayne Ross. Albany: State University of New York Press pp. 203–225.
- Neundorff, Anja, Richard G. Niemi and Kaat Smets. 2016. “The Compensation Effect of Civic Education on Political Engagement: How Civics Classes Make Up for Missing Parental Socialization.” *Political Behavior* 38(4):921–949.
- Niemi, Richard G. and Jane Junn. 1998. *Civic Education: What Makes Students Learn*. New Haven, CT: Yale University Press.
- Ostwald, Kai, Elvin Ong and Dimitar Gueorguiev. 2019. “Language Politics, Education, and Ethnic Integration: The Pluralist Dilemma in Singapore.” *Politics, Groups, and Identities* 7(1):89–108.
- Paglayan, Agustina S. 2022. “Education or Indoctrination? The Violent Origins of Public School Systems in an Era of State-Building.” *American Political Science Review* 116(4):1242–1257.
- Paluck, Elizabeth Levy, Roni Porat, Chelsey S. Clark and Donald P. Green. 2021. “Prejudice Reduction: Progress and Challenges.” *Annual Review of Psychology* 72(1):533–560.
- Persson, Mikael. 2015. “Classroom Climate and Political Learning: Findings from a Swedish Panel Study and Comparative Data.” *Political Psychology* 36(5):587–601.
- Russell, Susan Garnett and Dijana Tiplic. 2014. “Rights-Based Education and Conflict: A Cross-Naional Study of Rights Discourse in Textbooks.” *Compare: A Journal of Comparative and International Education* 44(3):314–334.
- Salem-Gervais, Nicolas and Rosalie Metro. 2012. “A Textbook Case of Nation-Building: The Evolution of History Curricula in Myanmar.” *Journal of Burma Studies* 16(1):27–78.

- Schulz, Wolfram, John Ainley, Julian Fraillon, Bruno Losito and Gabriella Agrusti. 2016. *IEA International Civic and Citizenship Education Study 2016 Assessment Framework*. Amsterdam: IEA.
- Schulz, Wolfram, John Ainley, Julian Fraillon, Bruno Losito, Gabriella Agrusti and Tim Friedman. 2018. *Becoming Citizens in a Changing World: IEA International Civic and Citizenship Education Study 2016 International Report*. Cham: Springer.
- Sears, David O. and Carolyn L. Funk. 1999. "Evidence of the Long-Term Persistence of Adults' Political Predispositions." *The Journal of Politics* 61(1):1–28.
- Sim, Jasmine B.-Y. 2011. "Social Studies and Citizenship for Participation in Singapore: How One State Seeks to Influence its Citizens." *Oxford Review of Education* 37(6):743–761.
- Sim, Jasmine Boon-Yee. 2005. "Citizenship Education and Social Studies in Singapore: A National Agenda." *International Journal of Citizenship and Teacher Education* 1(1):58–73.
- Suárez, David F. 2008. "Rewriting Citizenship? Civic Education in Costa Rica and Argentina." *Comparative Education* 44(4):485–503.
- Suárez, David F. 2007. "Human Rights and Curricular Policy in Latin America and the Caribbean." *Comparative Education Review* 51(3):329–352.
- Tan, Tai Wei and Lee Chin Chew. 2004. "Moral and Citizenship Education as Statecraft in Singapore: A Curriculum Critique." *Journal of Moral Education* 33(4):597–606.
- Tan, Tai Wei and Lee Chin Chew. 2008. Political Pragmatism and Citizenship Training in Singapore. In *Citizenship Curriculum in Asia and the Pacific*, ed. David L. Grossman, Wing On Lee and Kerry J. Kennedy. Hong Kong: Comparative Education Research Centre, Springer pp. 147–161.
- Tesler, Michael. 2015. "Priming Predispositions and Changing Policy Positions: An Account

of When Mass Opinion Is Primed or Changed.” *American Journal of Political Science* 59(4):806–824.

Torney-Purta, Judith, Rainer Lehmann, Hans Oswald and Wolfram Schulz. 2001. *Citizenship and Education in Twenty-Eight Countries: Civic Knowledge and Engagement at Age Fourteen*. Amsterdam: International Association for the Evaluation of Educational Achievement.

Velayutham, Selvaraj. 2017. “Races without Racism?: Everyday Race Relations in Singapore.” *Identities* 24(4):455–473.

Weiss, Chagai M., Shira Ran and Eran Halperin. 2023. “Educating for Inclusion: Diversity Education Programs Can Reduce Prejudice Toward Outgroups in Israel.” *Proceedings of the National Academy of Sciences* 120(16):e2218621120.

Wen, Ziyi, Tzu-Jung Lin, Michael Glassman, Saetbyul Kim, Shantanu Tilak, Manisha Nagpal and Seung Yon Ha. 2023. “The Development of Early Adolescents’ Social Perspective Taking Through Small-Group Discussion.” *The Journal of Early Adolescence* 43(9):1129–1163.

Çayır, Kenan. 2015. “Citizenship, Nationalist and Minorities in Turkey’s Textbooks: From Politics of Non-Recognition to ‘Difference Multiculturalism’.” *Comparative Education* 51(4):519–536.