University of Groningen

Teaching Tolerance in a Globalized World: Final Remarks

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Editors

Teaching Tolerance in a Globalized World

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Volume 4

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Foreword

IEA's mission is to enhance knowledge about education systems worldwide and to provide high-quality data that will support education reform and lead to better teaching and learning in schools. In pursuit of this aim, it conducts, and reports on, major studies of student achievement in literacy, mathematics, science, citizenship, and digital literacy. These studies, most notably IEA's Trends in International Mathematics and Science Study (TIMSS), Progress in International Reading Literacy Study (PIRLS), International Civics and Citizenship Education Study (ICCS), and International Computer and Information Literacy Study (ICILS), are well established and have set the benchmark for international comparative studies in education.

The studies have generated vast datasets encompassing student achievement, disaggregated in a variety of ways, along with a wealth of contextual information which contains considerable explanatory power. The numerous reports that have emerged from them are a valuable contribution to the corpus of educational research.

Valuable though these detailed reports are, IEA's goal of supporting education reform needs something more: deep understanding of education systems and the many factors that bear on student learning advances through in-depth analysis of the global datasets. IEA has long championed such analysis and facilitates scholars and policymakers in conducting secondary analyses of our datasets. Thus, we provide software such as the International Database Analyzer to encourage the analysis of our datasets, support numerous open access publications, including the peer-reviewed journal—*Large-scale Assessment in Education*—dedicated to the science of large-scale assessment and publishing articles that draw on large-scale assessment databases, and organize a biennial international research conference to nurture exchanges between researchers working with IEA data.

The **IEA Research for Education** series represents a further effort by IEA to capitalize on our unique datasets, so as to provide powerful information for policymakers and researchers. Each report focuses on a specific topic and is produced by a dedicated team of leading scholars on the theme in question. Teams are selected on the basis of an open call for tenders; there are two such calls a year.

Tenders are subject to a thorough review process, as are the reports produced. (Full details are available on the IEA website.)

This fourth volume in the series is concerned with teaching tolerance. We live at a time when the historic contract between young people and adults, whereby the energy of the former is channeled by the wisdom of the latter, is increasingly perverted. When authority figures use both broadcast and social media to spread antagonism to the 'other'—immigrants and asylum seekers, in particular—and young people are led to believe that their life chances are being whittled away as a consequence, there is an urgent context for focusing on tolerance in our education systems. If schools fail at producing young adults who are open in their attitudes and tolerant in their behavior, who value the gifts that diversity brings and are equipped to challenge hostile commentary, social and economic progress will be at risk.

Teaching tolerance is a matter for schools in every country, and best practice is enhanced by sharing experience and insights. Despite much academic and other writing, there is relatively little transnational data on the underlying factors. The IEA International Civic and Citizenship Education Study (ICCS) conducted in 2009 (and building on earlier IEA work in the field) is a major source of relevant data and provides the platform for the studies reported here. The authors, themselves coming from different countries, develop models for understanding the development of tolerance, and how tolerant attitudes and behaviors can be fostered, focusing particularly on attitudes toward immigrants, ethnic minorities, and women. The authors distinguish between student and school-level factors and draw on ICCS datasets to interrogate these factors across different school systems. This enables them to identify the impact of various background factors and demonstrate which school practices are optimal for addressing diversity and promoting tolerance.

Researchers and policymakers alike will find much of value here. The report deepens our understanding of the development of tolerance in young people and helps clarify the research agenda in the area. It will also assist educators and policymakers in designing effective school interventions to promote tolerance.

Forthcoming reports in the series will focus on in-depth analysis of twenty years of TIMSS data, including novel modeling approaches offering new insights for researchers.

Seamus Hegarty
Chair IEA Publications and Editorial Committee

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Chapter 1
Teaching Tolerance in a Globalized World: An Introduction

**Maria Magdalena Isac, Andrés Sandoval-Hernández
and Daniel Miranda**

Abstract The increasing diversity of student populations is a global educational trend. The relatively recent rapid influx of immigrants, refugees and asylum seekers, coupled with issues of increasing intolerance, social exclusion and feelings of alienation, and extremism among young people, are posing complex challenges for educational systems around the world. Education has a key role to play in preparing future generations to address these problems and ensuring that young people acquire the social, civic, and intercultural competences needed for active and successful participation in society. This book presents five empirical studies, designed to examine differing factors and conditions that may help schools and teachers in their endeavors to promote tolerance in a globalized world. The 2009 International Civic and Citizenship Education Study (ICCS) provided the research data. This introductory chapter describes the overall theoretical framework, discusses key constructs, and outlines the aims guiding the five studies, concluding with an overview of all chapters.

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1.1   Introduction

Diversity in education is no longer a phenomenon specific to restricted cultural contexts. In contemporary times, increasing diversity[1] of student populations is a global educational trend (Hastedt 2016; Organisation for Economic Co-operation and Development 2015). The discourses on diversity in educational settings are mainly focused on the relatively recent rapid influx of immigrants, refugees and asylum seekers, coupled with issues of increasing intolerance, social exclusion and feelings of alienation and extremism among young people. Nevertheless, these sources of difference intersect with other dimensions and identities such as gender, socioeconomic status, religion, disability and sexual orientation, creating complex challenges for schooling.

Educational systems are often overwhelmed by issues of equality and the inclusion of diverse populations, while simultaneously striving to achieve excellence and prepare young people for active and efficient participation in the labor market and society. Many policy actions tend to focus primarily on topics such as enhancing the academic outcomes of immigrant students, mainstream language acquisition or ethnic mixing. Less attention is being paid to curricular aims and activities directed at creating inclusive classrooms that can embrace diversity and nurture attitudes of mutual tolerance among youth. This is only recently becoming the focus of attention within educational practice.

Holding attitudes of tolerance toward other groups is a fundamental feature of a mature citizenship in democratic societies (Almond and Verba 1963; Sherrod and Lauckhardt 2009). Yet tolerance is certainly a controversial, multifaceted and complex concept (Forst 2003; Green et al. 2006; Mutz 2001; Van Driel et al. 2016). While in a broad sense, tolerance can be understood as respect, acceptance and appreciation of diversity (Unesco 1995; Van Driel et al. 2016), in educational settings, tolerance is often conceptualized in relation to civic and intercultural competences and in terms of positive attitudes toward equal rights for different groups (Green et al. 2006).

Attitudes of tolerance may take various forms, depending on their underlying conceptualization and the groups involved. Weldon (2006), for example, distinguished between political and social tolerance (see also Quintelier and Dejaeghere 2008). Political tolerance concerns granting democratic and political rights to different groups in society while social tolerance refers more to the evaluation of direct contact with people from out-groups (e.g. inter-ethnic friendships). Other scholars (Forst 2003; Green et al. 2006; Mutz 2001) draw attention to the distinction between different types of tolerance according to the differing contexts and the "subjects of toleration". In this respect, individuals may experience and exhibit attitudes of tolerance concerning a wide range of groups based on, among other factors, ethnicity, immigrant status, gender, and lifestyle choices.

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[1]In this publication we focus primarily on diversity relating to immigration status, ethnicity and, to some extent, gender.

Moreover, conceptualizations of tolerance may often include differing perspectives. For example, one perspective is oriented to the rejection of social groups and another oriented to the respect or acceptance of other social groups (Freitag and Rapp 2013). These approaches are not necessarily in opposition (Van Zalk and Kerr 2014), but rather are different dimensions of the development of recognition of social rights and liberties (Rapp and Freitag 2015). On the one hand, the rejection approach is focused on the negative attitudes toward difference, such as intolerance or prejudice. On the other hand, the acceptance approach is focused on the development of democratic principles and its application to all sociopolitical groups (Freitag and Rapp 2013).

Researchers and educational practitioners have long been concerned with identifying factors and conditions that have the potential to help schools and teachers promote tolerance (Côté and Erickson 2009; Rapp and Freitag 2015; Van Driel et al. 2016). However, the body of existing research is largely dominated by individual-level theoretical explanations (e.g. Allport's 1954 contact hypothesis; the social identity perspective advanced by Tajfel and Turner 1979) emerging largely from social-psychological research (Quintelier and Dejaeghere 2008; Weldon 2006). Research that has the potential to take into account the multiple contexts shaping tolerance, as well as individual- and societal-level explanations, is still largely needed.

International large-scale assessments (ILSA) such as the International Civic and Citizenship Education Study (ICCS) 2009 of the International Association for the Evaluation of Educational Achievement (IEA), have the potential to tremendously improve the study of tolerance in youth[2] by providing the opportunity to analyze differing explanatory mechanisms in a multitude of multi-leveled contexts. Existing secondary analyses of ICCS 2009 and its predecessor, the 1999 Civic Education Study (CIVED), have already made important contributions to the field. With minor exceptions (Caro and Schulz 2012), most studies (Barber et al. 2013; Elchardus et al. 2013; Isac 2015; Isac et al. 2012; Janmaat 2014; Torney-Purta et al. 2008; Torney-Purta and Barber 2011) operationalize tolerance in terms of positive attitudes toward immigrants or, applying Weldon's (2006) conceptualization, in terms of political tolerance toward immigrants. Taken together, these findings have pointed to the importance of different explanatory mechanisms. The factors identified by these studies concern characteristics of schools, classrooms and educational systems, but also individual student traits and background.

The work of Torney-Purta et al. (2008), for example, was among the first in a consistent body of research to show the importance of open class and school climates for promoting more positive attitudes toward immigrant rights. Other research (Isac et al. 2012; Janmaat 2014) has shown that heterogeneous class and school contexts (e.g. the proportion of immigrant students in a school or the

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[2]Although not the subject of this volume, we acknowledge that other ILSAs (e.g. the World Values Survey, European Social Survey, and Eurobarometer Surveys) have a similar potential when it comes to the study of tolerance in adult populations.

opportunity to interact with immigrant peers) are linked with more positive attitudes among non-immigrant students toward immigrants in general.

Moreover, studies with a particular focus on country and educational system characteristics put forward macro-level explanations of tolerance. These studies (Barber et al. 2013; Elchardus et al. 2013; Janmaat and Mons 2011) highlight the role of sociocultural country characteristics (e.g. levels of economic and democratic development, policies toward immigrants) and features of educational systems (e.g. public steering and levels of differentiation within educational systems). These studies highlight the relevance of studying tolerance in context.

In addition, many studies (see e.g. Isac 2015; Torney-Purta et al. 2008) have shown consistent individual differences in political tolerance. Female students, students with more civic knowledge, higher educational expectations and a higher socioeconomic status tend to have more favorable attitudes toward immigrants. Such work indicates the importance of the individual student's background in relation to tolerance.

The existing research on the topic of tolerance among youth based on analyses of the CIVED 1999 and ICCS 2009 data provides valuable indications concerning potentially relevant factors at the student, classroom/school, and country levels. These factors are generally expected to be positively related to the tolerance levels of young people. Yet, some important knowledge gaps remain in the field and these IEA studies can provide further opportunities for data analysis relevant for a large number of educational systems worldwide. For example, and partially due to a lack of data, most previous studies have largely conceptualized tolerance in a somewhat narrow framework (e.g. focusing preponderantly on tolerance toward some groups like immigrants). Moreover, the majority of studies have looked at average relationships across countries and focused mainly on direct effects of differing explanatory factors.

This report aims to fill some of these gaps by taking into account: (a) broader conceptualizations of tolerance, including attitudes toward the rights of three different social groups: immigrants, ethnic groups and women; (b) the potential relationships between these types of outcomes; (c) the strength of relationships within different levels (individual, school, educational system level); (d) the complexity of direct and indirect (e.g. mediation, moderation) relationships; and (e) the variation of these relationships among countries (common and country-specific, differential effects[3]).

Therefore, this volume presents five empirical studies that aim to address some of the gaps in the literature mentioned above. Each of the studies tries to take into account the hierarchical layers of relationships (by controlling for relevant factors at each level) but give in-depth attention to a particular level of analysis. The

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[3]It is important to point out that, as is customary in describing the results of path analysis and/or structural equation models, we use the word "effect" to describe the association between variables rather than to ascribe a causal nature to the observed pattern of associations.

combined results aim to provide additional evidence regarding factors and conditions that have the potential to help schools and teachers promote tolerance.

1.2   Conceptual Framework

This section elaborates further on the description of the concept of tolerance as operationalized in the current publication. A brief description of the most important groups of explanatory factors considered across the volume is also presented. For further detailed presentations of key concepts, we refer the reader to each of the chapters.

1.2.1   Attitudes Toward Equal Rights

As already stated in this introduction, the concept of tolerance is complex and multifaceted, as is usual in the arena of citizenship aspects (Miranda et al. 2017). We here operationalize it in terms of attitudes toward equal rights for three different social groups: immigrants, ethnic groups and women.

The conceptualization of tolerance in terms of attitudes toward equal rights for different groups is common in available definitions of citizenship competences. Hoskins and Mascherini (2009), for example, located the idea of support toward egalitarian attitudes within the wider discussion about active citizenship behaviors. This concept assumes that the dispositions of equality are expected qualities that any person shall possess and manifest as a good citizen (Hoskins and Kerr 2012; Hoskins and Mascherini 2009; Schulz et al. 2016). This operationalization corresponds to a large extent to the one advanced in the ICCS framework, where attitudes and beliefs regarding the right of all people to be recipients of the same fair treatment, stand out among the most relevant democratic principles (Schulz et al. 2016).

The present work defines tolerance as the degree to which people support equal rights for different groups in society (Schulz et al. 2008; Van Zalk and Kerr 2014). Although we acknowledge that tolerance can be directed toward any group in society, we situate our conceptualization in the context of the ICCS study and, building on its framework and available information, focus on attitudes toward equal rights for immigrants, ethnic groups and women. Therefore, the present work is largely situated within the political tolerance and the acceptance approach lines of research.

As previously mentioned, other studies use a similar approach to conceptualize and measure tolerance (Barber et al. 2013; Bridges and Mateut 2014; Dotti Sani and Quaranta 2017; Isac et al. 2012; Janmaat 2014; Strabac et al. 2014; Van Zalk and Kerr 2014) but often focus only on attitudes toward equal rights for immigrants. Significantly fewer studies have focused on support for equal rights toward ethnic

groups and women (Bolzendahl and Coffé 2009; Dotti Sani and Quaranta 2017). This work in this book considers all these demographic groups, as well as the potential relationships between them.

1.2.2 Explanatory Factors

Building on results and insights from previous studies, the research presented here strives to take account of both the conceptual and the empirical complexities of educational systems and of other, less formal, influences on student attitudes toward equal rights.

Our conceptual framework (Fig. 1.1) is used to structure factors and conditions at the student and school levels that have the potential to help promote positive attitudes toward the rights of immigrants, ethnic groups and women. In line with previous researchers (e.g. Isac et al. 2012; Janmaat 2014; Torney-Purta et al. 2008; Torney-Purta and Barber 2011), we acknowledge that several explanatory mechanisms must be taken into account when studying attitudes toward equal rights. We expect that the attitudes of young people toward equal rights may be impacted along different lines and that explanatory variables can be situated at different levels, including, individual background characteristics and experiences (e.g. gender, socioeconomic status, and the quantity and nature of discussion about equal rights with peers), and school environment (e.g. school composition, classroom climate, and teaching practices). We also acknowledge that these factors operate in diverse national contexts.
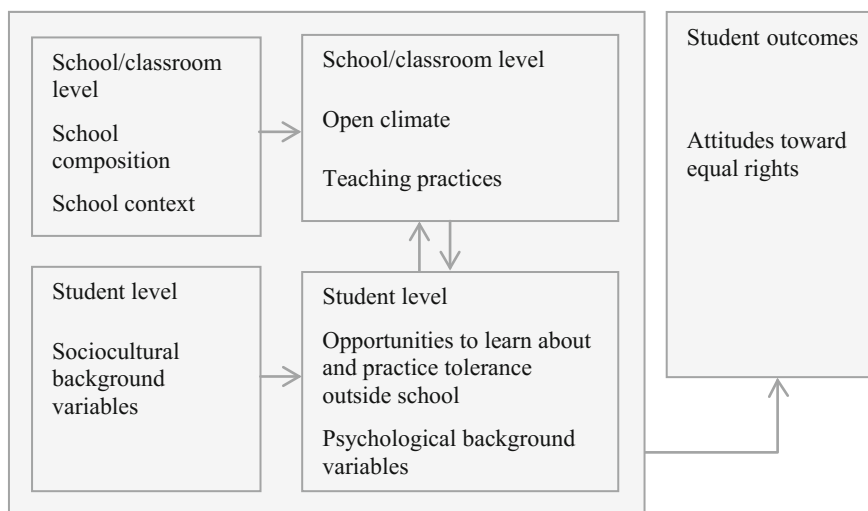
Fig. 1.1 Conceptual framework for the concept of tolerance considered in this book

Each chapter takes into account this complexity of multiple hierarchical layers of explanatory mechanisms, while giving in-depth consideration to a particular set of explanatory variables.

1.3 Overview of Chapters

Chapter 2 introduces the IEA's International Civic and Citizenship Education Study (ICCS 2009; see www.iea.nl/iccs), its main objectives, assessment design and the specific operationalization of the variables used in our research. We explain the characteristics of the data and describe the methodological approaches used in the analytical chapters of this book and their common features.

Chapter 3 examines, from a comparative perspective, the reliability and validity of the main constructs used to measure tolerance (attitudes toward equal rights for immigrants, ethnic groups and women). As all the statistical models presented here take a comparative approach, the issue of measurement invariance of latent variables across countries is highly relevant. The chapter thus investigates cross-cultural comparability of latent variables through the empirical analysis of measurement invariance conducted in a factor-analytical framework.

Chapter 4 evaluates the capacity of schools and other agents to promote attitudes toward equal rights. Arguing that school communities engaging a variety of actors (such as school principals, teachers and families) play a central role in the development of egalitarian attitudes, this assumption is tested empirically taking into account the complexity of multilevel explanatory mechanisms and the importance of looking at country-specific relationships. Based on the literature and building on the results of Chap. 4, the subsequent chapters explore in deeper detail the relationship between the outcomes and selected explanatory variables.

Chapter 5 focuses on one of the most relevant sources of diversity in contemporary education, immigration. This chapter gives particular attention to the mechanisms that educational systems employ to address this type of diversity and discusses in depth the issue of educational segregation of immigrant students. Analyses are conducted to describe from a comparative perspective, patterns of segregation in different educational systems and to relate them to student attitudes toward equal rights.

In Chap. 6, the importance of the school environment for the development of egalitarian attitudes is brought to the fore. Echoing one of the main findings in this field of research, the investigation focuses on the importance of stimulating open classroom discussion in which free dialogue and critical debate are encouraged among people of diverse backgrounds. The analyses go deeper into the potential role of open classroom discussion, identifying moderation effects.

Highlighting the documented impact of student background (as opposed to school characteristics) on attitudinal measures toward equal rights, Chap. 7 gives particular attention to the role of student socioeconomic status. Both conceptually

and empirically, there is a need to use more refined measures of family background when describing the link of this variable to tolerance.

Finally, Chap. 8 summarizes the findings of the empirical studies, discussing their implications for policy and practice and reflecting on potential avenues for further research.

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Chapter 2
How Do We Assess Civic Attitudes Toward Equal Rights? Data and Methodology

Andrés Sandoval-Hernández, Daniel Miranda and Maria Magdalena Isac

Abstract Analyzing tolerance in youth may help educators to identify strategies to promote tolerance. This chapter describes the IEA's International Civic and Citizenship Education Study (ICCS) 2009, outlining the main objectives of the survey and the assessment design. Specific variables were selected from the ICCS data for the five empirical studies in this report. After assessing the variables used in the different chapters, the methodological features common to the different analytical chapters of this book are discussed in greater detail.

2.1 The International Civic and Citizenship Education Study 2009 Data

The International Civic and Citizenship Education Study (ICCS) 2009 conducted by the International Association for the Evaluation of Educational Achievement (IEA) was the principal data source for all the research chapters in this report (Brese et al. 2011). The 2009 study investigated the ways in which lower-secondary school

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students (mainly in grade 8[1]) were prepared to undertake their roles as citizens (Schulz et al. 2010). Students completed a knowledge test and a questionnaire inquiring into attitudes and background information. Additionally, ICCS also included a set of instruments designed to gather information from and about teachers, schools and education systems: a teacher questionnaire completed by the teachers themselves, a school questionnaire completed by school principals and a national context survey completed by the national research coordinators.

The samples in each country were designed as two-stage cluster samples. In the first stage probability proportional to size (PPS) procedures were used to select schools within each country. In the second stage, within each sampled school, an intact class from the target grade was selected at random, with all the students in this class participating in the study. Therefore, for each participating country, the ICCS 2009 data have a multilevel structure (Snijders and Bosker 2011) with students nested within classes/schools. The surveyed students are representative samples of the population of grade 8 students in each country. Each national sample satisfying the participation standards set by the IEA was equally weighted (Schulz et al. 2011).

In this report, we use data from all 38 countries that participated in the study (see Table 2.1 for the school sample sizes in each country).

2.2 Variables

This section presents a brief description of the dependent and independent variables used in the analyses. Details about the operationalization of concepts and construction of variables are presented in each of the analytical chapters.

2.2.1 Dependent Variables

As already mentioned in this volume, we operationalize the outcome variables in terms of support for equal rights for three different social groups: immigrants, ethnic groups and women. To do so, we use confirmatory factor analysis (CFA) to construct measures based on three scales originally included in the ICCS 2009 database: student attitudes toward equal rights for immigrants (IMMRGHT), student attitudes toward equal rights for all ethnic/racial groups (ETHRGHT), and student attitudes toward gender equality (GENEQL). We modified the original scales for two main reasons: to ensure a better fit with our conceptual framework

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[1]ICCS assesses students enrolled in the eighth grade, provided that the average age of students at this year level is 13.5 years or above. In countries where the average age of students in Grade 8 is less than 13.5 years, Grade 9 is defined as the target population.

Table 2.1 Student numbers and school sample sizes for countries participating in ICCS 2009

Country	Total number of schools	Total number of students
Austria	135	3385
Belgium (Flemish)	151	2968
Bulgaria	158	3257
Chile	177	5192
Chinese Taipei	150	5167
Colombia	196	6204
Cyprus	68	3194
Czech Republic	144	4630
Denmark	193	4508
Dominican Republic	145	4589
England	124	2916
Estonia	140	2743
Finland	176	3307
Greece	153	3153
Guatemala	145	4002
Hong Kong, SAR	76	2902
Indonesia	142	5068
Ireland	144	3355
Italy	172	3366
Korea	150	5254
Latvia	150	2761
Liechtenstein	9	357
Lithuania	199	3902
Luxembourg	31	4852
Malta	55	2143
Mexico	215	6576
Netherlands	67	1964
New Zealand	146	3979
Norway	129	3013
Paraguay	149	3399
Poland	150	3249
Russia	210	4295
Slovakia	138	2970
Slovenia	163	3070
Spain	148	3309
Sweden	166	3464
Switzerland	156	2924
Thailand	149	5263

Source Schulz et al. (2010)

and to ensure that the scales were comparable across countries. Detailed information about the procedures followed to construct these scales and to test their measurement invariance can be found in Chap. 3.

2.2.2 Independent Variables

Each of the contributions in this volume acknowledges that there are multiple and complex hierarchical layers of explanatory mechanisms that could be influencing student attitudes toward equal rights for different social groups (see Chap. 1 in this volume). For this reason, according to the specific objectives and conceptual frameworks used in each of the chapters, the independent or explanatory variables used in this volume are selected from the three available background questionnaires in the ICCS database (the student, teacher and school questionnaires). In addition, in some of the chapters that follow, the researchers created new variables derived from the variables originally included in the database (for example, measures of school average socioeconomic background, and the level of immigrant student segregation; see later for full details) and included information from external sources (such as measures of statistical dispersion intended to represent the income or wealth distribution of a nation's residents). A detailed description of all the independent variables used in the analyses contained in this volume is included in each of the analytical chapters.

2.3 Analytical Strategy

This section describes the methodological features common to the different analytical chapters included in this report. Two main points are central to the analytical strategy used in this volume. The first one is that all the analyses included here are comparative in nature, and the second is that the data used for the analyses are characterized by having a nested or hierarchical structure.

In order to account for the first point, in Chap. 3 we used multi-group confirmatory factor analysis (MGCFA) to test for scale comparability or invariance (Davidov et al. 2014; Millsap and Meredith 2007) of the three variables that are to be used as outcomes in the remaining analytical chapters (namely student attitudes of tolerance toward equal rights for immigrants, ethnic groups and women). We rescaled resulting coefficients so as to ensure comparability with ICCS 2009 scaling procedures for attitudinal measures (Schulz et al. 2011).

In Chaps. 4–7, we used different specifications of multilevel models to analyze the relationship between selected explanatory variables and student attitudes toward equal rights while accounting for the nested structure of the ICCS data (students in schools, schools in countries). Parameters are estimated using maximum likelihood estimation, and missing data are handled using full information

maximum likelihood, which is proven to be more efficient and to have less bias than alternative procedures (Enders 2001; Enders and Bandalos 2001).

Chapters 4, 6 and 7 describe three-level models with students at level one, schools at level two and countries at level three. Even though the predictors we use in these chapters are mostly only at levels one and two, we use three-level models in order to follow the principle of parsimony (a balance between simplicity and accuracy) (Seasholtz and Kowalski 1993). The obvious alternative for these analyses would be to fit two-level models for each of the 38 participating education systems. In this case, however, we would have needed to estimate 38 parameters for every predictor in the model (for example β in a regression model). Furthermore, while we would have been able to observe the variation in the strength of the relationship between predictors and outcomes across countries, we would not have had a test to assess the statistical significance of these differences. Conversely, by fitting three-level models, we estimated only two parameters for every predictor: the fixed effects that indicate the average relationship for the 38 countries between the predictor and the outcome, and the random effect that indicates the variation in this relationship across countries and provides a statistical test to evaluate the statistical significance of this variation. In other words, this specification separates all observations dependency and enabled us to draw cluster-specific inferences (McNeish et al. 2017). Following the procedure suggested by Rutkowski et al. (2010), we used separate weights for each level, so that the student-level used a combination of the student and class weights included in the ICCS 2009 database and the school-level uses the pure school weight. It is important to mention that because of the high number of predictors, their varying distribution and the specific missing value patterns across countries, the three-level models in Chap. 4 do not converge. For this reason, in this chapter, we opted to fit a two-level model for each of the education systems included in the analysis. That is, we estimated 38 parameters (one for each participating education system) for each predictor included in the model.

Another common methodological feature across most of the chapters was the inclusion of the three outcomes (namely attitudes toward equal rights for immigrants, ethnic minorities and women) simultaneously in the same model. This specification enabled us to control for each of the other egalitarian measures. For example, when including the three predictors simultaneously, the estimated relationship between student gender and their attitudes toward gender equality represented the average difference between boys and girls in their dispositions toward this specific egalitarian measure, discounting the covariance among attitudes toward gender equality, ethnic equality and immigrant equality. Chapter 5 is the exception, where the analysis focuses on only one of the outcomes: attitudes toward equal rights for immigrants.

A third methodological feature common across the chapters included in this volume is the statistical software used for the different analyses. After downloading the datasets from the IEA Data Repository, we used the IDB Analyzer (IEA 2017) to merge the data from different questionnaires and different countries into one single database. The explanatory analyses were performed using Mplus 7.4

(Muthén and Muthén 2017) and the Mplus Automation R package (Hallquist and Wiley 2016). Stata 12 (StataCorp 2011) was used for descriptive analyses and R software (R Core Team 2016) for the production of graphs.

Finally, it is important to note that in eight countries participating in ICCS 2009, the percentage of immigrant students is extremely small (less than 50 cases); these countries are Bulgaria, Chile, Chinese Taipei, Colombia, Korea, Malta, Poland and Slovakia (see Schulz et al. 2010 for more details). While we have chosen to report the results for these countries, these results should be interpreted with caution because of the sampling variability associated with the estimates. Similarly, it is important to note that Hong Kong SAR and the Netherlands did not meet the participation rates required by the ICCS 2009 sampling procedures (85% of the selected schools and 85% of the selected students within the participating schools, or a weighted overall participation rate of 75%). This means that the data collected in these countries is not strictly representative of the target population of the study. For this reason, the results reported for these countries have to be interpreted with caution. See the ICCS 2009 International Report for more discussion of this issue (Schulz et al. 2010).

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Chapter 3
Measurement Model and Invariance Testing of Scales Measuring Egalitarian Values in ICCS 2009

Check for
updates

Daniel Miranda and Juan Carlos Castillo

Abstract Based on the conceptualization of democratic principles in the International Civic and Citizenship Education Study (ICCS) 2009, particularly attitudes concerning equal rights for disadvantaged groups, such as immigrants, ethnic groups and women, this chapter evaluates the extent to which the scales measuring attitudes toward gender equality, equal rights for all ethnic/racial groups and equal rights for immigrants are invariant, and to what extent they can be compared across the countries participating in the study. Multi-group confirmatory factor analysis is used to estimate a measurement model of the egalitarian attitudes and its measurement equivalence across the 38 countries ($n = 140,000$ 8th grade students) that participated in ICCS 2009. The results indicate that the original scales are non-invariant. Nevertheless, with some modifications, the proposed conceptual model was found to be invariant across countries. The chapter concludes with a discussion of the theoretical and empirical implications of the model.

Keywords Ethnic minorities · Gender equality · Immigrants · International Civic and Citizenship Education Study (ICCS) · International large-scale assessments Measurement invariance

3.1 Introduction

The growing number of international comparative studies brings about several measurement issues. Do the item translations reflect the same meanings? Are some concepts country-specific? Do the items relate to the same or different constructs? All these, and other questions relate to the issue of validity of the comparisons, itself something that entails a paradox: in order to compare, we need to ensure that

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the instrument is the same. In the context of international studies, several authors have shown the relevance of obtaining comparable measures and the potential consequences of not doing so (Guenole and Brown 2014). Measurement invariance assumes that the instrument (questionnaire) measures the same concept in the same way for different groups (Meredith 1993; Millsap 2011; Millsap and Everson 1993; Rutkowski and Svetina 2014; Van De Schoot et al. 2015; Vandenberg and Lance 2000).

The study of egalitarian attitudes of people in different countries and its comparability is a big challenge for the social sciences (Davidov et al. 2016). As established in Chap. 1, the study of egalitarian attitudes has a particular relevance for students of school age. The ICCS study has different scales to measure egalitarian attitudes toward three specific groups: immigrants, ethnic groups and women. Although the design of the study questionnaire follows a careful procedure in order to allow comparability, still the comparison between countries based on these measures has not yet been tested. This chapter uses multiple-group confirmatory factor analysis to evaluate the extent to which the scales measuring attitudes toward gender equality, equal rights for all ethnic/racial groups and equal rights for immigrants are equivalent across countries.

3.1.1 Measuring Attitudes Toward Equal Rights

The study of political attitudes as a reflection of a country's political culture has a long tradition in social sciences, particularly in comparative studies. Tolerance, which is considered central to a democratic political culture, is a central attitude typically measured in this research tradition. Following this, several studies are oriented to characterize different countries in terms of the political attitudes and/or political behavior of their inhabitants; and to compare their political cultures.

Considering the set of available international studies, these can be classified as those that are aimed at adult populations and those that are aimed at the young populations. Studies aimed at measuring different political attitudes, beliefs and preferences in the population aged above eighteen years old include the International Social Survey Program (ISSP), the World Value Survey (WVS), the European Social Survey (ESS) and the Latin American Public Opinion Project (LAPOP). There are relatively few comparative studies focused on young populations barring those developed by the IEA, whose studies include the Civic Education Study (CIVED) and the Civic and Citizenship Education Study (ICCS; see http://iccs.iea.nl/).

Within this set of identified studies, the measure of tolerance takes different forms. For instance, LAPOP considers the support for the right to vote for people with views extremely critical of a country's system of government. In the case of WVS, tolerance is defined as the extent to which people support a public office position and/or publically demonstrate in support of excluded populaces. The ICCS questionnaire is oriented to capture beliefs and attitudes about the rights of three

social groups: immigrants, ethnic groups and women, considering a set of items that measure the degree to which people support equal rights for different groups in society (Schulz et al. 2008; Van Zalk and Kerr 2014). This chapter adopts the ICCS measures of tolerance.

Few studies consider attitudes toward equal rights for specific groups as a measure of tolerance as a democratic principle (Barber et al. 2013; Bridges and Mateut 2014; Isac et al. 2012; Janmaat 2014; Dotti Sani and Quaranta 2017; Strabac et al. 2014; Van Zalk and Kerr 2014). For instance, Barber et al. (2013) considered equal rights attitudes toward immigrants, specifically, as a relevant aspect of pro-social civic engagement. In the same vein, Dotti Sani and Quaranta (2017) evaluated attitudes toward gender equality considering that this type of equality and its support were relevant aspects of human development. Despite advances in the study of attitudes toward equal rights in recent years, even with the same ICCS data, there are still a number of aspects that could be improved. First, most of the studies focus on one specific group, mainly migrants, and less frequently on equal rights for women (Bolzendahl and Coffé 2009; Dotti Sani and Quaranta 2017) leaving aside the interrelation between attitudes toward equality of different groups. For instance, are the individuals who show larger support toward immigrants the same as those who support equal rights for women? Secondly, most of the reviewed studies in this field do not test for measurement equivalence even though they perform country comparative analysis. The present chapter aims to overcome some of these limitations by addressing three target groups simultaneously (women, migrants and ethnic minorities), as well as by testing equivalence of the measurement model of equal rights attitudes.

3.1.2 Measurement and Equivalence

As with most concepts in the social sciences, attitudes toward equal rights are not observed directly but rather are hypothetical constructs. Given that these attitudinal concepts should be measured as latent constructs (Bollen 2002), the latent approach implies that the hypothetical underlying constructs are captured by a set of observable indicators by using statistical techniques. For instance, confirmatory factor analysis (Bollen 2002; Hoyle 2014), one of the most extended approaches, allows the evaluation of the proposed latent measures.

One of the main challenges in comparative studies is to achieve the statistical equivalence of measures across groups, such as societies, allowing meaningful comparability (Davidov et al. 2014; Millsap and Meredith 2007). The evaluation of the comparability is technically known as measurement invariance (Millsap 2011) or measurement equivalence (Davidov et al. 2014). In the remainder of this chapter, we adopt the term measurement invariance. The wider socioeconomic, sociocultural and/or sociopolitical differences of the respondents demand the development of studies that follow strict technical criteria in order to improve comparability. Statistical techniques may be used to assess measures and improve comparisons

(Davidov et al. 2014; Millsap and Everson 1993; Van De Schoot et al. 2015). Multi-group confirmatory factor analysis (MGCFA) is one of the most recognized techniques for assessing measurement invariance. This statistical tool allows the evaluation of the comparability of measures through the sequential estimation of different models that represent levels of invariance with increasing constraints. In the sequence, the first level is the configural invariance. The configural model assumes that the construct of the latent is measured by the same indicators in all groups. This is the baseline model that evaluates the configuration of latent variables but does not warrant any comparison across groups (Beaujean 2014). The second level is the metric invariance. The metric model, also known as weak invariance, constrains the factor loading to be the same across all groups and, in that way, evaluates whether the indicators have the same strength in the measure of the latent variables. This level of invariance is considered the minimal condition for comparison. It allows to compare only the relation of measured latent variables with other covariates (Beaujean 2014; Davidov et al. 2014; Desa 2014). The third level is scalar invariance, also known as strong invariance. This level, in addition to loadings, constrains the intercepts or thresholds (for categorical variables) to be the same across groups. This level allows for meaningful comparisons of levels (averages) of the latent measured across groups and comparisons of the relation of latent variables with other covariates. In that sense, the scalar invariance level allows rankings that compare averages across groups or the use of statistical models, such as regression or multilevel modeling, that compare relational patterns across groups. Finally, there is a fourth level, labeled strict invariance. This level adds the constraint of error variance across groups, increasing the comparability of latent scales. Nevertheless, given that scalar invariance is sufficient for meaningful comparisons between group means and covariate patterns, the strict invariance level is often not estimated (Beaujean 2014; Davidov et al. 2014).

The present study follows both the CFA and MGCFA approaches. CFA was used to evaluate the latent structure of the gender rights attitudes, immigrants' rights attitudes and ethnic rights attitudes that make up the egalitarian attitudes model. MGCFA enabled us to evaluate the comparability of the latent measures across countries.

3.2 Methods

3.2.1 Data

As outlined in Chap. 2, our study used data from the ICCS 2009 database. The final sample showed small variations because the set of variables involved in these analyses have a specific missing pattern. Given that, the final sample consisted of 138,605 students from 38 countries.

3.2.2 Variables

The variables used as indicators for the dimensions are related to the students' opinions about equal rights for immigrants, ethnic groups and women (Table 3.1). In each case we provide the item code used in the ICCS 2009 User Guide, Supplement 1 (Brese et al. 2014). The scale of gender equality considers three items that refer to equality between men and women in participatory government, rights and equal payment. The original scale has items that refer to male supremacy, such as "Women should stay out of politics" (IS2P24C), "Men are better qualified to be

Table 3.1 Set of indicator items used to measure the egalitarian attitudes

Measures of tolerance in ICCS 2009		ICCS code
Gender equality attitudes: there are different views about the roles of women and men in society. How much do you agree or disagree with the following statements?		
1. Strongly disagree	Men and women should have equal opportunities to take part in government	IS2P24A
2. Disagree	Men and women should have the same rights in every way	IS2P24B
3. Agree	Men and women should get equal pay when they are doing the same jobs	IS2P24E
4. Strongly agree		
Ethnic equality attitudes: there are different views on the rights and responsibilities of different <ethnic/racial groups> in society. How much do you agree or disagree with the following statements?		
1. Strongly disagree	All ethnic/racial groups should have an equal chance to get a good education in <country of test>	IS2P25A
2. Disagree	All ethnic/racial groups should have an equal chance to get good jobs in <country of test>	IS2P25B
3. Agree	Schools should teach students to respect members of all ethnic/racial groups	IS2P25C
4. Strongly agree	Members of all ethnic/racial groups should have the same rights and responsibilities	IS2P25E
Immigrant equality attitudes: people are increasingly moving from one country to another. How much do you agree or disagree with the following statements about <immigrants>?		
1. Strongly disagree	Immigrants should have the opportunity to continue speaking their own language	IS2P26A
2. Disagree	Immigrants who live in a country for several years should have the opportunity to vote in elections	IS2P26C
3. Agree	Immigrants should have the opportunity to continue their own customs and lifestyle	IS2P26D
4. Strongly agree	Immigrants should have all the same rights that everyone else in the country has	IS2P26E

Notes The wording for the items varies among countries. See the *ICCS 2009 User guide for the international database, Supplement 1* (Brese et al. 2014) for further information

political leaders than women" (IS2P24F) and "When there are not many jobs available, men should have more right to a job than women" (IS2P24D). These items were not used in the measure of attitudes toward gender equality.

There are four items in the scale for equality of ethnic groups: education, employment, respect and rights. Finally, there are four items for measuring equality of immigrants: the right to speak your native language, the opportunity to vote, the right to maintain your own lifestyle, and equality of rights with all others in the country.

3.2.3 Analytical Strategy

The analytical strategy consisted of three steps. The first step involved the evaluation of the measurement adequacy of the scales using CFA. Secondly, we evaluated the measurement invariance of the proposed scales using MGCFA. Finally, we present descriptive statistics of the newly created scale and a cross-country comparison of the country averages.

In order to evaluate the goodness of fit for each country model using CFA, we implemented a chi-square test as an initial procedure. This index is used to test the reasonability of the measurement hypothesis "in terms of how well the solution reproduces the observed variances and covariances among the input indicators" (Brown 2006, p. 41), although we note that this index has been criticized as less sensible for large samples (Brown 2006; Rutkowski and Svetina 2014). In order to circumvent this weakness, we also used three other indicators: the comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA). Brown (2006) proposed a set of cut-off point criteria for evaluating a good model's fit: ≤ 0.06 in the case of RMSEA and closer to 0.95 or greater for CFI and TLI. As an alternative, Brown (2006) proposed that CFI and TLI values in the range 0.90–0.95 could be considered acceptable.

In the case of MGCFA, the evaluation of the model and the invariance testing were evaluated sequentially. The configural model (baseline), estimates the same configuration of items for each group. The metric model, estimates the model constraining the factor loadings to the same value for each group. Finally, the scalar model constrains the factor loadings and intercepts to be the same for each group. In each of the three cases, we evaluated the model fit using the criteria proposed by Brown (2006). We used the change in the fit indexes between the higher to lower levels of invariance to test the invariance. The main index used to account for the invariance was based on a chi-square test, where the relative change is evaluated. For instance, when comparing the baseline model (configural) with a more constrained model (metric), an increase in chi-square indicating a degradation of the model can be expected. If the degradation of the constrained model is statistically significant, then the proposed model is non-invariant. Nevertheless, this index has the same weakness as noted for CFA, namely it is less sensible for large sample sizes (Brown 2006). Rutkowski and Svetina (2014) developed guidelines more

appropriate for international large-scale assessment (ILSA) involving several countries (more than 20 groups in this case); we therefore used these to evaluate model fit. Specifically, Rutkowski and Svetina (2014) advised that the difference in the fit indexes between two successive levels of invariance (for example configural vs. metric) must be ≤ 0.020 for any of the three indexes (CFI, TLI and RMSEA).

Finally, we used the classical test theory functions (CTT) package (Willse 2014) to estimate latent measures and enable the rescaling of the original scores. This is an established R package for this type of analysis. The rescaling was adjusted to reach a mean = 50 and standard deviation (SD) = 10. We used this scale for our descriptive and country comparisons.

3.3   Results

In this section, we first present the general results regarding the extent to which the empirical indicators correspond to the theoretical measurement model of egalitarian attitudes, tested by CFA procedure for each country. Second, we examine the results of the multi-group analyses and the equivalence of measures across the countries tested. We conclude with the patterns of equality attitudes within countries.

3.3.1   Proposed Scale: Single-Country Analyses and Invariance Testing

The CFA analyses for each country indicate that the proposed measurement structure for the modified egalitarian attitudes model is confirmed for the 38 countries. All groups show good fit indexes (see Table 3.2). However, there are some countries where the TLI or RMSEA are slightly below the cutoff point, even though remaining within an acceptable range; for instance, Spain has a TLI < 0.95 (0.934) and a RMSEA > 0.06 (0.084).

The invariance testing indicates good fit indexes for the configural, metric and scalar level of the egalitarian attitudes model; all the fit indexes were above the cutoff criteria (see Table 3.3).

The relative comparison between the configural and metric model indicates that metric invariance was achieved (Table 3.3). The differences in CFI, TLI and RMSEA were acceptable according to the criteria of Rutkowski and Svetina (2014). This level of invariance permits us to conduct comparable correlational analyses.

Our results suggest a good fit for the metric level of invariance, indicating factor loadings were stable across countries for the three equality measures (see Fig. 3.1). Looking at the scale measuring immigrants' attitudes toward equal rights, the items IMMRGT1 and IMMRGT4 show factor loadings <0.2 in only one country.

Table 3.2 Confirmatory factor analysis of fit indexes of the proposed egalitarian attitudes model, by country

Country	Chi square	df	n	CFI	TLI	RMSEA
Malta	5915.35	41	2112	0.951	0.934	0.058
Spain	19755.34	41	3276	0.951	0.935	0.084
Estonia	13443.20	41	2712	0.957	0.942	0.072
Dominican Republic	5566.87	41	4259	0.960	0.946	0.036
Indonesia	10742.94	41	5006	0.960	0.946	0.046
Italy	21459.43	41	3357	0.962	0.948	0.077
Liechtenstein	4674.39	41	355	0.964	0.952	0.107
Belgium (Flemish)	20042.72	41	2962	0.964	0.952	0.077
Slovenia	20563.33	41	3054	0.967	0.956	0.073
Lithuania	15058.34	41	3893	0.973	0.963	0.051
Netherlands	10817.54	41	1909	0.973	0.963	0.061
Denmark	35044.37	41	4355	0.974	0.966	0.071
Thailand	15040.33	41	5261	0.974	0.965	0.043
Cyprus	15900.80	41	3076	0.976	0.968	0.055
Norway	37857.19	41	2917	0.976	0.968	0.087
Sweden	42171.56	41	3410	0.976	0.968	0.085
Czech Republic	39389.75	41	4621	0.978	0.970	0.068
China	33873.45	41	5151	0.979	0.972	0.058
Slovakia	20461.83	41	2966	0.979	0.971	0.060
Latvia	11096.33	41	2743	0.980	0.974	0.044
Ireland	30732.35	41	3313	0.981	0.974	0.066
Finland	34579.55	41	3292	0.982	0.976	0.068
Greece	18853.35	41	3103	0.982	0.976	0.051
Bulgaria	14939.47	41	3187	0.983	0.977	0.044
Russia	22388.74	41	4289	0.983	0.978	0.046
Luxembourg	35287.40	41	4780	0.985	0.980	0.052
Poland	28409.12	41	3242	0.985	0.979	0.057
Switzerland	19665.77	41	2907	0.985	0.979	0.050
Austria	19464.16	41	3366	0.986	0.981	0.045
Korea	36756.66	41	5249	0.986	0.981	0.049
Chile	22177.99	41	5160	0.987	0.983	0.036
England	37732.70	41	2881	0.987	0.982	0.065
Hong Kong, SAR	42586.49	41	2816	0.989	0.986	0.062
Mexico	31577.74	41	6464	0.989	0.986	0.036
New Zealand	27638.17	41	3874	0.989	0.985	0.044
Colombia	26650.95	41	6108	0.990	0.987	0.032
Paraguay	9196.75	41	3229	0.991	0.988	0.025
Guatemala	14430.70	41	3950	0.993	0.991	0.024

df degrees of freedom, *n* number of students sampled, *CFI* comparative fit index, *TLI* Tucker-Lewis index, and *RMSEA* root mean square error of approximation

Table 3.3 Fit indexes of the original model of egalitarian attitudes

Model	CFI	TLI	RMSEA	Δ CFI	Δ TLI	Δ RMSEA
Configural	0.980	0.974	0.056			
Metric	0.982	0.979	0.049	0.002	0.005	−0.007
Scalar	0.969	0.975	0.054	−0.013	−0.004	0.005

CFI comparative fit index, *TLI* Tucker-Lewis index, and *RMSEA* root mean square error of approximation
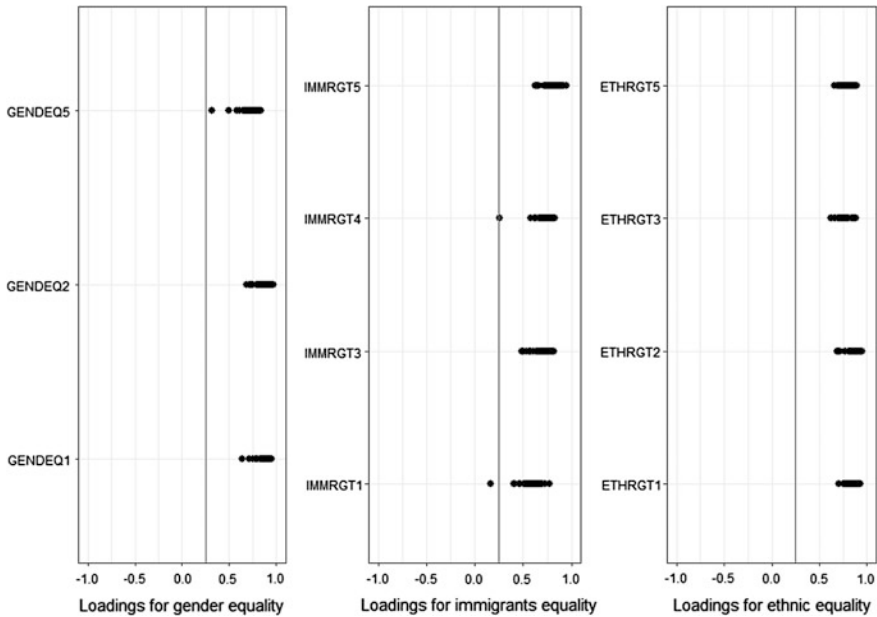
Fig. 3.1 Loading distributions of scale indicators in each country. Each dot represents the loading for each indicator for each scale

The gender equality scale also shows very stable factor loadings, except for item GENDEQ5, which has a lower factor loading only for one country. Finally, for the ethnic equality scale, the factor loadings are very stable for all items in all countries. In spite of the variations in factor loading, the fit indexes indicate that those variations are within the acceptable range of non-invariance.

In the same vein, the relative comparison between the metric and scalar models indicates that scalar invariance is achieved. The differences in the CFI, TLI and RMSEA values were all within the cutoff range suggested by Rutkowski and Svetina (2014) (see Table 3.3). This level of invariance permits comparisons of the averages of the egalitarian attitudes to be made across countries.

3.3.2 Average Country Comparison

Given the scalar level of comparability achieved in measurement invariance analyses, and using the information provided by the multigroup confirmatory models, we estimated scales for gender equality attitudes, immigrant equality attitudes and ethnic equality attitudes. The scales were saved using the option "save fscores" available in Mplus 7.4 (Muthén and Muthén 2017). The saved latent variables have a mean of 0 and standard deviation of 1. For a better illustration of averages and posterior modeling of variables, the latent measures were rescaled to a mean of 50 and standard deviation of 10.

For gender equality attitudes, Spain, Liechtenstein, Chile, Sweden, Austria and Chinese Taipei presented the highest averages (see Fig. 3.2). For immigrant equality attitudes, Mexico, Guatemala, Chinese Taipei, Colombia, Chile, Paraguay and the Dominican Republic presented the highest averages (most of these countries being located in Latin America) (see Fig. 3.2). For ethnic equality attitudes, Chinese Taipei, Guatemala, Chile, Paraguay, Mexico, Colombia, the Dominican Republic and Luxembourg showed the highest averages (again, this list is dominated by countries in Latin America) (see Fig. 3.2). Conversely, the lowest averages for gender equality attitudes were shown in Lithuania, Latvia, Thailand, the Russian Federation and Indonesia. The lowest average immigrant equality attitudes were recorded for Indonesia, Latvia, Liechtenstein, England, Belgium (Flemish) and the Netherlands. For ethnic equality attitudes, the lowest averages were shown in Belgium (Flemish), Cyprus, Finland, Malta, the Czech Republic, Latvia and the Netherlands (see Fig. 3.2).
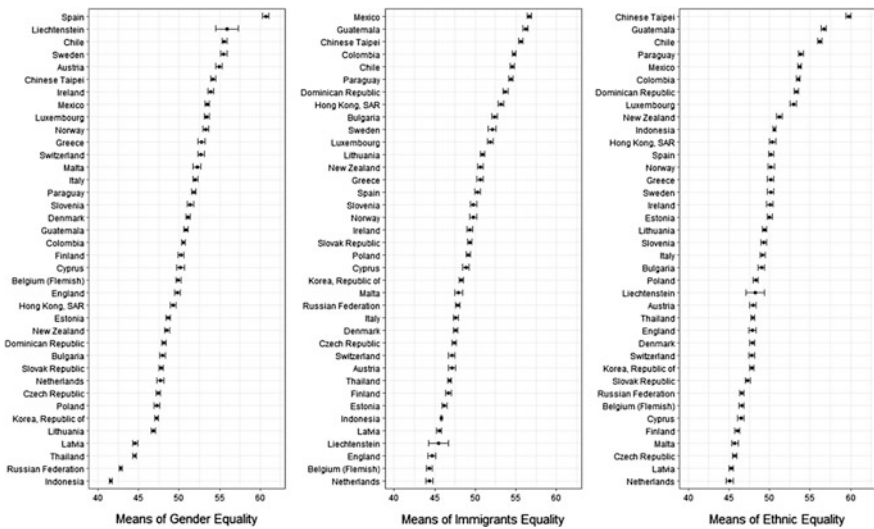
Fig. 3.2 Average distribution of equality attitudes by country

Table 3.4 Variance decomposition of egalitarian attitudes

Level	Gender equality (%)	Immigrant equality (%)	Ethnic equality (%)
Country level	14.1	10.6	9.8
School level	5.3	5.2	5.2
Individual level	80.6	84.2	85.0

There is a considerable variation in the averages, indicating that some proportion of the egalitarian attitude variance occurs at the country level (Fig. 3.2). Furthermore, given the nested sample design of the ICCS study, another portion of the variance can be associated with the school level.

In order to describe the decomposition of variance, a three-level model was estimated, allowing for the estimation of the proportion of variance associated with each level of the analyses. The three equality attitudes show proportions of variance associated with the country level above 10%. The variance associated with school level is, in the three cases, around 5% (see Table 3.4).

A complementary result shows that the egalitarian attitudes of participation are correlated with different strengths between each other, which indicates that the types of participation do not function independently of each other. For instance, the average correlation between gender equality attitudes and immigrant equality attitudes is 0.64 (min = 0.39, max = 0.86), the average correlation between gender equality attitudes and ethnic equality attitudes is 0.72 (min = 0.61, max = 0.94), and the average correlation between immigrant equality attitudes and ethnic equality attitudes is 0.80 (min = 0.55, max = 0.95).

3.4 Discussion and Conclusions

We aimed to evaluate the measurement model of egalitarian attitudes proposed by the ICCS study, and to test its operationalization and comparability using the international survey data. The model is founded on a theoretical framework that considers tolerance as an orientation to the acceptance of or respect for other social groups, more specifically as the degree to which people support equal rights for different groups in society. The tested model considers egalitarian attitudes toward three specific social groups: immigrants, ethnic groups and women. The analyses were performed using data provided by the countries that participated in ICCS 2009.

Our results for the proposed measurement model of egalitarian attitudes indicate that the scales are invariant across the analyzed countries at scalar level. This implies that all latent variables have the same structure in the analyzed countries. Moreover, their scalar invariant structure allows for direct comparisons of the mean scores and correlates of the latent variables across countries (Beaujean 2014; Davidov et al. 2014). The confirmation of the structure of the model indicates that the included dimensions are useful for evaluating egalitarian attitudes within the context of the family unit, at the school level, or at the country level, allowing meaningful comparisons.

Finally, the contextual dependence of variance (at country and school level) justifies the multilevel modeling statistical technique as an adequate strategy for the estimation of any explanatory model.

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Chapter 4
Influence of Teacher, Student and School Characteristics on Students' Attitudes Toward Diversity

Ernesto Treviño, Consuelo Béjares, Ignacio Wyman and Cristóbal Villalobos

Abstract Schools are increasingly seen as a potential vehicle for promoting positive attitudes toward diversity and equality in different countries. However, the debate regarding the actual capacity of schools to fulfill this task, set against the role of families and individual preferences, is still open. To analyze how the characteristics of schools may shape student attitudes toward diversity in terms of gender, immigration and ethnic groups, a multilevel model that takes into consideration the characteristics of the school, such as the composition of diversity, school climate and teacher practices, and individual characteristics, such as socioeconomic background and civic interest, was used. Schools seem to have a limited leverage in promoting attitudes toward diversity, due to the fact that variance in attitudes occurs mainly within schools. The main findings are discussed in terms of research, policy and practice.

Keywords Attitudes toward diversity · International Civic and Citizenship Education Study (ICCS) · International large-scale assessments
School climate · School composition

4.1 Introduction

In an increasingly globalized world, issues of equality and the inclusion of diverse populations within societies represent a constant challenge for schools and societies. There is a widespread notion that schools should promote student development, not only in terms of academic outcomes but also in relation to

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attitudes that enhance respect and inclusion, and favor equality among diverse societal groups (Pfeifer et al. 2007; Shafiq and Myers 2014). However, there are open questions regarding both the capacity of schools to promote such values and the relative weight of individual, family and school factors that explain differences in student attitudes toward diversity.

The idea that schools are vehicles for promoting positive attitudes toward diversity and equality is a matter of academic debate. Promoting positive attitudes toward diversity entails the pedagogical challenge of transmitting the culture and traditions of a society while, simultaneously, embracing diversity (van Vuuren et al. 2012). Furthermore, this challenge has long been seen as a political dispute regarding the notion that schools should comply with the mission of shaping the way of life of future generations (Palmer 1957). In order to address this challenge, it is necessary that schools create institutional and instructional strategies that allow for students from different backgrounds to respectfully share their perspectives and understand those of others (Richards et al. 2007). Empirical evidence on the capacity of the school system to promote positive attitudes toward diversity may be of vital importance to inform this debate.

In this chapter, we analyze how the characteristics of schools and families shape student attitudes toward diversity in terms of gender, immigration and ethnic minorities.

4.2 Conceptual Framework

In order to explain differences in student attitudes toward diversity, this section presents a conceptual framework that distinguishes factors related to student and school characteristics. Among the school features, the conceptual model considers the dimensions of contextual structural characteristics of the school, the levels of diversity in the composition of the student body of the school, the school climate, and teacher practices and attitudes. The student variables include socioeconomic background factors, and student civic interest and participation (Fig. 4.1).

4.2.1 Structural Characteristics of the School

Structural characteristics of schools represent a key dimension to explain differences in student outcomes. These structural features capture elements related to the organization of school systems that cannot necessarily be attributed to the actions of the school and its personnel. For example, the way in which countries organize the provision of schooling through public, private-subsidized and private schools is a relevant feature that affects student educational outcomes (Bellei 2009; Carrasco and San Martín 2012; Epple and Romano 1998). However, the way in which students from different socioeconomic backgrounds are distributed through
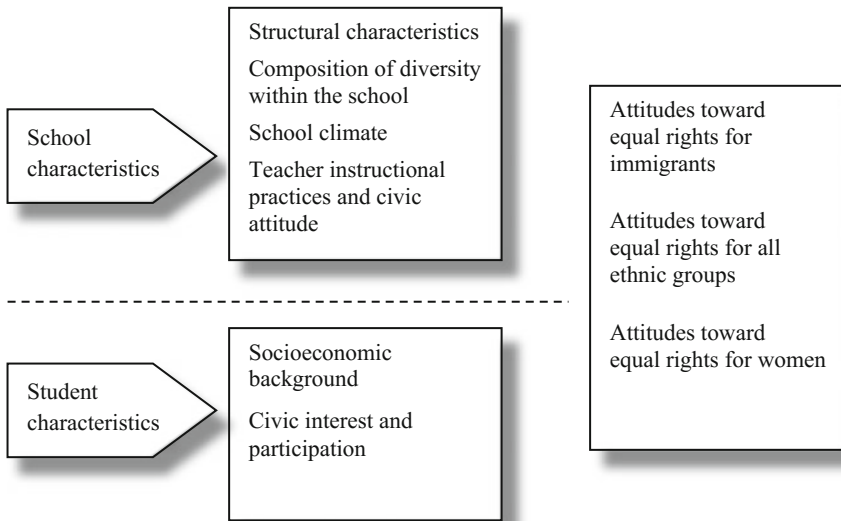
Fig. 4.1 Conceptual framework of school and student variables that explain student attitudes toward diversity

different schools is also an important structural characteristic of the school, which depends mainly on the geographical distribution of the population and the regulations that shape the admission processes of schools (Contreras et al. 2010; Valenzuela et al. 2014). In sum, the type of school administration and the socioeconomic composition of the school are two structural characteristics that should be considered in the analyses on student outcomes as a way of controlling for variables that respond to the social and regulatory context.

In the case of civic attitudes, research has shown that the structural characteristics of the school, such as the average socioeconomic background and the type of school administration, are important predictors of civic attitudes (Schulz et al. 2010; Treviño et al. 2016). The analyses performed in this chapter consider as structural characteristics the type of school management and the socioeconomic composition of the student body of the school.

4.2.2 Diversity of Students Within Schools and Intergroup Contact Theory

Demographic diversity in the composition of the student body in a school represents an important dimension for the development of attitudes toward others. Diversity within a school's student body offers a measure of the opportunity that

different social groups (for example, groups of different socioeconomic or immigration status) have to encounter each other in the school. In culturally and socially diverse schools, it is expected that students from different groups can build relationships with students from other backgrounds. Conversely, in homogeneous schools, students do not have the opportunity to learn, through the experience of knowing people from different societal groups, about the commonalities and differences of such human groupings. It is expected that the experience of sharing in student bodies with demographic diversity can have a positive influence on the attitudes toward different groups.

The development of intergroup attitudes has been explained widely through the intergroup contact hypothesis (Allport 1954), which proposes that contact with members of different groups will reduce prejudice and promote positive relationships and attitudes among them (Beelmann and Heinemann 2014). Other theories about intergroup relationships highlight both the role of learning, whether by socialization and experience or by the acquisition of new information, and the role of the cognitive development stage of children in promoting positive intergroup attitudes (Beelmann and Heinemann 2014).

Intergroup contact theory states that the reduction of intergroup prejudice is higher when contact takes place under the condition of equal status between groups (Pettigrew and Tropp 2006). Moreover, cross-group interactions that can be considered as active friendship have shown to be especially effective in promoting positive intergroup attitudes (Davies et al. 2011). The three main factors that have been identified through which intergroup contact reduces prejudice are: increasing knowledge about a different group; reducing the feeling of threat and anxiety; and allowing perspective taking and empathy (Pettigrew and Tropp 2008).

Often conceptualized as being in antagonism with the concept of tolerance, prejudice can be understood as an explicit or implicit negative attitude or behavior directed toward members of an out-group (see (Beelmann and Heinemann 2014). Both individual and social factors have been used to explain the development of different attitudes toward groups of people, from prejudice to tolerance.

For analytical purposes, this study defines diversity, as it applies to a student body, as the percentage of immigrant, ethnic minority and female students in a school. Such a definition is aligned with contact theories and the evidence suggesting that schools are crucial settings that can influence intergroup relations and attitudes (Pfeifer et al. 2007) through student and teacher characteristics, as well as via school practices and policies. Additionally, behavior modeling in school has been stated as a strategy that develops positive intergroup attitudes. However, besides these school factors, it is important to underscore that individual features related to the developmental stages of students, such as perspective-taking and empathy, are crucial to counteract prejudice and have to be taken into account when assessing intergroup attitudes (Pfeifer et al. 2007). Furthermore, diversity in the composition of the student body within a school has been linked to civic attitudes (Janmaat 2015).

4.2.3 School Climate

School climate has been identified as an essential factor related to students' social, emotional and academic development, as well as a key factor in explaining the development of pro-social behavior and support for democratic values (Cohen 2014) and educational outcomes (Cohen et al. 2009; Thapa et al. 2013; Treviño et al. 2010, 2015). According to Cohen et al. (2009, p. 182) "school climate refers to the quality and character of school life" and is represented by the norms, values and relationships that characterize the social and learning environment of the school (Cohen 2014; Cohen et al. 2009).

School climate has gained relevance as a predictive variable for a wide range of student developmental outcomes, such as student mental and physical health, self-concept, and school retention (Thapa et al. 2013). For example, a positive school climate is directly related to student motivation to learn; it mitigates the impact of socioeconomic status (SES) on academic results; it reduces aggression, violence and harassment; it is a protective factor for general well-being (Berkowitz et al. 2016; Thapa et al. 2013). School climate is also a relevant factor in the development of civic attitudes, as a school that promotes democratic practices and policies provides students with wider civic learning opportunities, which give students the chance to learn through the embodiment of the democratic processes (Wilkenfeld 2009). A democratic school climate will prepare students to act as responsible citizens in society, following democratic principles (Biesta et al. 2009). In this regard, a violent school climate has been associated with biased beliefs and attitudes of intolerance toward other groups upon the basis of race, ethnicity, class and gender among the students. Furthermore, negative and violent school climates are the expression of prejudicial attitudes in students (Cobia and Carney 2002).

Yet, school climate is a complex concept that may comprise a wide variety of dimensions, such as feelings of safety, positive interpersonal relationships, quality of teaching and learning, and the environment (Cohen et al. 2009). This study covers some of these aspects by using two proxy variables as a measure of climate: the perceptions of the students about their influence on school decisions and, teachers' perceptions of the social problems in the school.

4.2.4 Teacher Practices and Attitudes

Teacher practices and attitudes represent the final link in the complex chain of educational systems. It is through the daily display of teacher practices and attitudes within the classroom that the curricular and societal purposes expected from education take shape. Practices represent the materialization of educational aims, and teacher attitudes may also shape student attitudes in a variety of domains.

Effective teacher practices can be regarded as a complex construct, composed of three independent domains: (a) the use of strategies to support the emotional

development of students in the classroom, (b) the use of strategies to make productive use of classroom time, (c) the use of teaching strategies of instructional support to assist students to reach deeper levels of both understanding and metacognition (Pianta et al. 2011). Active learning strategies that allow students to build their own understanding and motivate them to deepen their learning processes offer more opportunities to develop profound understanding (Campbell 2008; Hattie 2009; Quintelier 2010). A broad approach to teacher practices suggests that promoting learning requires that teachers use diverse teaching strategies in the classroom, provide direction and redirection for students to understand content, and use evaluation to monitor student learning (Hattie 2009).

Besides instructional practices, the embodiment of democratic values by teachers is regarded as a relevant factor in promoting democratic values and attitudes in students, since civic education is a contextual process where both student participation and experiences at school are key in fostering democratic attitudes and practices (Biesta et al. 2009). Moreover, role modeling by teachers in the classroom and the school is an important factor for the learning of democratic values by students; through teacher attitudes and the relationships between students and teachers, important lessons are being experienced by students (Sanderse 2013; Veugelers and Vedder 2003).

This study considers, as predictors of attitudes toward diversity, the teachers' confidence in teaching methods, teachers' reports of student participation in class activities, and student perceptions about the openness for discussions in classrooms. Also, the study tests the relationship between student attitudes toward diversity and teacher attitudes such as teacher participation in school governance and the personal participation by teachers in activities outside school.

The evidence available has highlighted the relevance of teachers as a key factor for student learning and academic achievement (Akiba and LeTendre 2009; Hanushek and Rivkin 2006). Furthermore, teachers, through their practices, influence not only academic achievement but also other outcomes related to attitudes and behaviors, as is the case with civic participation or engagement (Dassonneville et al. 2012; Gainous and Martens 2011; Quintelier 2010) and civic attitudes (Campbell 2008; Quintelier 2010).

4.2.5   Student Characteristics

Student characteristics represent important inputs when trying to measure the effects of schooling on different educational outcomes (Scheerens 2000) for two reasons. First, it is necessary to remove the influence of student background variables when estimating the effects of school variables on student outcomes. For example, the socioeconomic status of the students is a variable that usually influences education results, and removing the variance in student achievement that is attributed to this background variable is important in the estimation of school effects. Second, student characteristics can also be considered as main predictors of educational results,

as in the case of this analysis, where it is relevant to identify whether there are differences in attitudes by gender, ethnic background and immigrant status.

In this chapter, student characteristics are considered in two different ways. First, and in relation to contact theories, it is expected that members of the same social group show more positive attitudes toward other members of the same group. This implies that immigrant students may have more positive attitudes toward other immigrant students. The same hypothesis can be stated for students from ethnic groups. In the case of gender, it is expected not only that female students have better attitudes toward gender equality but also that they have more positive attitudes toward non-mainstream groups.

Student demographic characteristics represent important predictors for student outcomes, as evidence has extensively shown for the case of socioeconomic status and family background (Borman and Dowling 2010). Regarding civic outcomes, evidence has also shown that factors related to sociodemographic characteristics of students have predictive power in relation to student achievement and other civic outcomes (Isac et al. 2014).

4.2.6 Civic Interest and Participation

Adolescence is a crucial age for the development of support for democratic values, including tolerance, which is one of the central principles of democracy in a globalized and diverse society (Sherrod et al. 2002). Essential to democracy, as well, is the development of active citizens who can fully participate in society. Civic participation can be defined in relation to an ample range of activities and types of participation.

According to Ekman and Amnå (2012), there are four types of participation, two corresponding to civil participation and two corresponding to manifest political participation. Civil participation is based on interest in political and social issues, which can be materialized as involvement (paying attention to political issues) and as civic engagement (taking action). Political participation can be exerted through formal political participation (electoral and contact activities) and as activism (extra-parliamentary participation). Non-participation or disengagement can take active forms (as anti-political) or passive forms (as apolitical) (Ekman and Amnå 2012). All of these forms of participation represent ways in which young people can enhance social capital and develop citizenship and democratic values. The school can be regarded as a crucial source for socialization on civic participation and promotion of civic engagement.

In the present study, civic attitudes and behaviors have been operationalized through two constructs. First, civic participation includes student civic participation in the wider community and student civic participation at school. Second, regarding the variables of civic interest, the study includes student interest in politics and social issues, student discussion of political and social issues outside the school, student support for democratic values and student attitudes toward their country.

4.3 Methods

4.3.1 Data

The data used for the analyses were from the International Civic and Citizenship Education Study (ICCS) 2009 (for a description of this dataset see Chap. 2). The final sample used for the analyses included in this chapter varied slightly from the original dataset, as the set of variables involved in these analyses have specific missing patterns. Liechtenstein was not included in the analyses because the types of models adjusted did not converge due to the small number of schools in this country. There are two types of caveats in the data that should be taken into consideration in the present analyses. First, there is a limited number of immigrant and ethnic minority students in several countries, and the percentage of immigrant and ethnic minority students may not resemble country averages since the samples have not necessarily been stratified to be statistically representative of these groups. Furthermore, it is often the case that immigrant and ethnic groups are geographically concentrated in specific areas, thus performing analyses at country level with census data, for example, may be a way of studying this phenomenon of attitudes toward diversity in relation to these population groups in more depth. Second, there may be some caveats derived from the participation rates of teachers and the use of replacement schools; further details may be found in the ICCS 2009 technical report (Schulz et al. 2011).

4.3.2 Variables

Dependent Variables

The dependent variables were student attitudes toward equal rights for women, all ethnic groups and immigrants. There is one variable corresponding to each group, which was estimated using confirmatory factor analysis (CFA) and with invariance testing (for the specific description of the procedures followed to construct these variables see Chap. 3).

Independent Variables

The independent variables included in the analyses performed in this chapter are organized into school and student level variables, for a better understanding of the analytical strategy (Table 4.1). However, the description of the variables in the following paragraphs follows the organization of the conceptual framework.

The structural characteristics of the school are represented by the school mean of the national index of socioeconomic background and a dummy variable to differentiate privately managed schools from public schools. The diversity composition of the school is considered in the variables as the proportion of female, ethnic

Table 4.1 Variables included in the multilevel regression analyses

Variable name	Description	Scale
School level independent variables		
SCGENDER	Proportion of female students at school	Continuous variable with values between 0 to 1
SCETHNIC	Proportion of ethnic minority students at school	Continuous variable with values between 0 to 1
SCIMMIG	Proportion of immigrant students at school	Continuous variable with values between 0 to 1
NISB_GM	School average of the National index of socioeconomic background	School average of the factor scores with mean of 0 and standard deviation of 1
PRIVATE	Private school management[a]	Dummy variable with 1 = private and 0 = other
TSCPRO_C	Teachers' perceptions of social problems at school[a]	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
TSTUD_C	Teachers' perceptions of student influence on decisions about school[a]	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
TCHPART_C	Teachers' participation in school governance[a]	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
TCHACT_C	Teachers' personal participation in activities outside school[a]	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
CONFTC_C	Confidence in teaching methods[a]	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
TSTCLA_C	Teacher reports of student participation in class activities	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
PAR_GM	School average of students' civic participation at school	School average of the IRT WLE scores with mean of 50 and standard deviation of 10
Student level independent variables		
SGENDER	Gender of the student	Dummy variable with 1 = female and 0 = male
SETHNIC	Ethnic background	Dummy variable with 1 = ethnic minority and 0 = non ethnic minority
SIMMIG	Immigrant	Dummy variable with 1 = immigrant condition and 0 = non-immigrant condition
NISB_M	National index of socioeconomic background	Individual factor scores

(continued)

Table 4.1 (continued)

Variable name	Description	Scale
PARTC_C	Students' civic participation in the wider community	IRT WLE scores with mean of 50 and standard deviation of 10
PAR_M	Students' civic participation at school	IRT WLE scores with mean of 50 and standard deviation of 10
OPDISC_C	Students' perception of classroom discussion	IRT WLE scores with mean of 50 and standard deviation of 10
POLDI_C	Students' discussion of political and social issues outside of school	IRT WLE scores with mean of 50 and standard deviation of 10
VALP_C	Students' perceptions of the value of participation at school	IRT WLE scores with mean of 50 and standard deviation of 10
DEM_C	Students' support for democratic values	IRT WLE scores with mean of 50 and standard deviation of 10
INTP_C	Students' Interest in politics and social issues	IRT WLE scores with mean of 50 and standard deviation of 10
ATTCNT_C	Students' attitudes toward their country	IRT WLE scores with mean of 50 and standard deviation of 10

IRT item response theory; *WLE* weighted likelihood estimator
[a]These variables were not included in the multilevel regression models for Cyprus, England, Greece, Lithuania, Luxembourg, the Netherlands and Slovenia. This decision was based on the capacity of prediction of models for these countries

minority and immigrant students in the school, which measure the level of exposure of the students to diversity. It is important to recall the caveats of the sample (see Sect. 4.3.1) regarding the proportion of immigrant and ethnic minority students. The more balanced the proportion of students from different groups in the school, the higher the likelihood that they have opportunities for intergroup contacts and interactions. Conversely, in schools with more homogeneous groups, either very high or very low proportions of female, ethnic minority and immigrant students, there is a lower probability of intergroup contact. Student perceptions of the value of participation at school and teacher perceptions of social problems at school represent the two proxy variables for school climate. The independent variables measuring teacher practices and attitudes include teacher confidence in teaching methods, teacher reports of student participation in activities in class, student perceptions about the openness for discussions in the classroom, teacher participation in school governance and teacher personal participation in activities outside school. In terms of student characteristics, the analyses consider student gender, ethnic background and immigrant status, as well as the national index of socioeconomic background, as predictors at the student level. Finally, regarding civic attitudes and behaviors, the independent variables include student participation in the wider community and at school, student interest in politics and social

issues, student discussion of political and social issues outside the school, student support for democratic values and student attitudes toward their country.

4.3.3 Analytical Strategy

To analyze the data, we first estimated the intra-class correlation coefficient (ICC) of the attitudes toward equal rights for women, all ethnic groups and immigrants. This was done in order to disentangle the percentage of variance in these dependent variables that occurs within and between schools. The analysis was applied separately to ICCS 2009 data from each of the 37 countries. The second step in the analysis strategy implied the fitting of one multilevel model per country for each of the 37 countries under analysis. As anticipated in the previous chapters, multilevel modelling is appropriate for this analysis because it considers the nesting of students within schools. The general specification of the model is presented in Eqs. (4.1) and (4.2):

$$Y_{ijk} = \beta_{0j} + \beta_{1j}X_{ij} + r_{ij} \tag{4.1}$$

$$\beta_{0j} = \gamma_{00} + \gamma_{01}W_{.j} + v_{0j} \tag{4.2}$$

$$\beta_{1j} = \gamma_{01} \tag{4.3}$$

Where Y are the different outcome variables and X represents a set of student-level variables (Eq. 4.1), while W represents school-level variables (Eq. 4.2), and Eq. (4.3) indicates that no random slopes are included in the estimated model. This method has been used in recent studies to analyze the effect of school on different outcomes (Leckie et al. 2011), as well as the compositional effect of the school in different outcomes (Raudenbush and Bryk 2002).

4.4 Results

We present our analysis of attitudes toward diversity by first providing a general overview of the decomposition of variance analysis, and then subsequently separating the variables that explain differences in attitudes toward diversity into the three categories, namely attitudes toward equal rights for women, all ethnic groups, and immigrants.

  The analysis of variance demonstrates that schools seem to have limited influence in promoting attitudes toward diversity because almost all the variance in student attitudes toward diversity occurs between students grouped in the same school. The within-school variance of the index of attitudes toward equal rights for women ranged from 82.5 to 98.3 (Table 4.2). The within-school variance of the

Table 4.2 Percentage of variance between schools (intra-class correlation coefficient)

Country	Attitudes toward equal rights for women (% variance)	Attitudes toward equal rights for all ethnic groups (% variance)	Attitudes toward equal rights for immigrants (% variance)
Austria	7.54	6.75	7.66
Belgium (Flemish)	5.46	5.76	8.11
Bulgaria	8.43	5.10	5.34
Chile	9.20	8.67	5.41
Chinese Taipei	3.05	3.07	2.17
Colombia	5.54	4.55	3.29
Cyprus	2.00	2.34	1.36
Czech Republic	4.00	3.51	3.75
Denmark	5.35	9.23	8.75
Dominican Republic	3.53	2.95	2.58
England	8.52	12.07	10.70
Estonia	5.38	4.04	5.34
Finland	2.85	2.46	3.63
Greece	5.18	4.78	4.36
Guatemala	5.54	5.70	2.20
Hong Kong, SAR	5.87	5.82	3.83
Indonesia	7.89	9.03	4.45
Ireland	10.70	7.32	6.16
Italy	4.94	7.81	9.28
Korea, Republic of	1.70	1.69	1.59
Latvia	6.36	6.39	5.86
Lithuania	8.44	5.98	5.40
Luxembourg	3.17	3.98	3.80
Malta	17.18	5.96	6.24
Mexico	7.37	7.01	5.06
Netherlands	17.46	9.81	8.15
New Zealand	12.38	10.41	8.03
Norway	2.27	2.86	4.84
Paraguay	6.45	5.40	5.24
Poland	5.39	6.93	6.09
Russian Federation	4.31	6.13	5.17
Slovakia	4.90	4.91	5.48

(continued)

Table 4.2 (continued)

Country	Attitudes toward equal rights for women (% variance)	Attitudes toward equal rights for all ethnic groups (% variance)	Attitudes toward equal rights for immigrants (% variance)
Slovenia	4.31	3.59	5.87
Spain	4.92	5.12	5.49
Sweden	5.96	8.39	13.61
Switzerland	6.36	6.14	4.99
Thailand	11.33	9.49	3.21

index of attitudes toward equal rights for all ethnic groups ranged from 87.9 to 97.7. Finally, the within school variance of the index of attitudes toward equal rights for immigrants ranged from 86.4 to 99.0. This means that attitudes toward diversity are rather heterogeneous among students that share the same school, suggesting that differences among schools may not be the main factor creating positive attitudes toward diversity. This finding may help to limit the expectations of policymakers and societal groups about the relative influence of the school system in creating positive attitudes toward diversity.

4.4.1 Attitudes Toward Equal Rights for Women

Positive attitudes toward equal rights for women were positively related to student characteristics. First, as was anticipated, female students consistently showed higher levels of attitudes toward equal rights for women in almost all the countries analyzed, with the exception of the Dominican Republic and Paraguay. Female students held more positive attitudes toward gender equality in comparison to male students, with the size of this coefficient ranging from 0.66 to 7.65 across countries (Fig. 4.2).

The intergroup contact theory has not proven to be robust across countries in the case of attitudes toward equal rights for women. The variable used to test this hypothesis, the percentage of female students in the school, was only significantly related to attitudes toward equal rights for women in five countries. In Hong Kong, Chile, the Dominican Republic and Poland there was a positive relationship between the percentage of female students in the school and attitudes toward gender; the higher the percentage of female students in the schools of these countries, the higher the general level of positive attitudes toward equal rights for women among students. However, in Indonesia there was a negative relationship between the percentage of female students in the school and the attitudes toward equal rights for women.

Second, there are variables describing the experience of students at school that are also positively related to attitudes toward equal rights for women. The variable

concerning student perceptions of the value of participation at school was directly related to the attitudes toward gender in most of the countries, with model coefficients showing a range of values from 0.06 to 0.29 for this relationship. Latvia, the Netherlands and Norway were the only three countries where this variable was not related to attitudes toward gender equality. The perception of students that the classroom offers an open space for discussion is also directly linked to students' attitudes toward gender in most countries, with the Dominican Republic, Guatemala, Korea, Lithuania, Malta, the Netherlands, and Thailand being the exceptions. The coefficients across countries showed that a change of one unit in the index of perception of openness for discussion in classrooms produces a change of 0.03–0.18 in the index of attitudes toward equal rights for women.

Student support for democratic values is the most robust predictor of positive attitudes toward equal rights for women. The coefficients across countries indicate that a change of one unit in the index of support for democratic values was statistically related to a change of 0.18–0.39 in attitudes toward equal rights for women (Fig. 4.3). This finding suggests that promoting democratic values in families, schools and societies as a whole may also help to shape positive attitudes toward equal rights for women. However, it is important to recall that these findings come from observational rather than causal analyses.

The socioeconomic composition of the student body of the school was positively associated with attitudes toward equal rights for women in 22 of the 37 countries analyzed. The statistically significant coefficients found fall within the range between 0.99 and 4.44 across countries, suggesting that as the level of socioeconomic status of the school population increases, positive attitudes toward equal rights for women among students sharing the same school also increase.

Finally, it is also important to note that in five countries, namely Bulgaria, Slovakia, the Russian Federation, the Dominican Republic and Finland, students attending private schools showed systematically less positive attitudes toward equal rights for women.

4.4.2 Attitudes Toward Equal Rights for All Ethnic Groups

When studying attitudes toward equal rights for all ethnic groups, recall that some countries may have low levels of ethnic diversity, a characteristic that may lead to limitations in the statistical analyses because of the low proportions of students from different ethnic groups captured in the sample. In Chile, Colombia, Czech Republic, Denmark and Korea <1% of the students in the sample defined themselves as part of a non-mainstream ethnic group (see Table 4.3).

We found that female students generally had more positive attitudes toward equal rights for all ethnic groups across countries than male students. This relationship holds for almost all sampled countries, with the exception of the Dominican Republic, Hong Kong, Malta and Paraguay. The magnitude of this
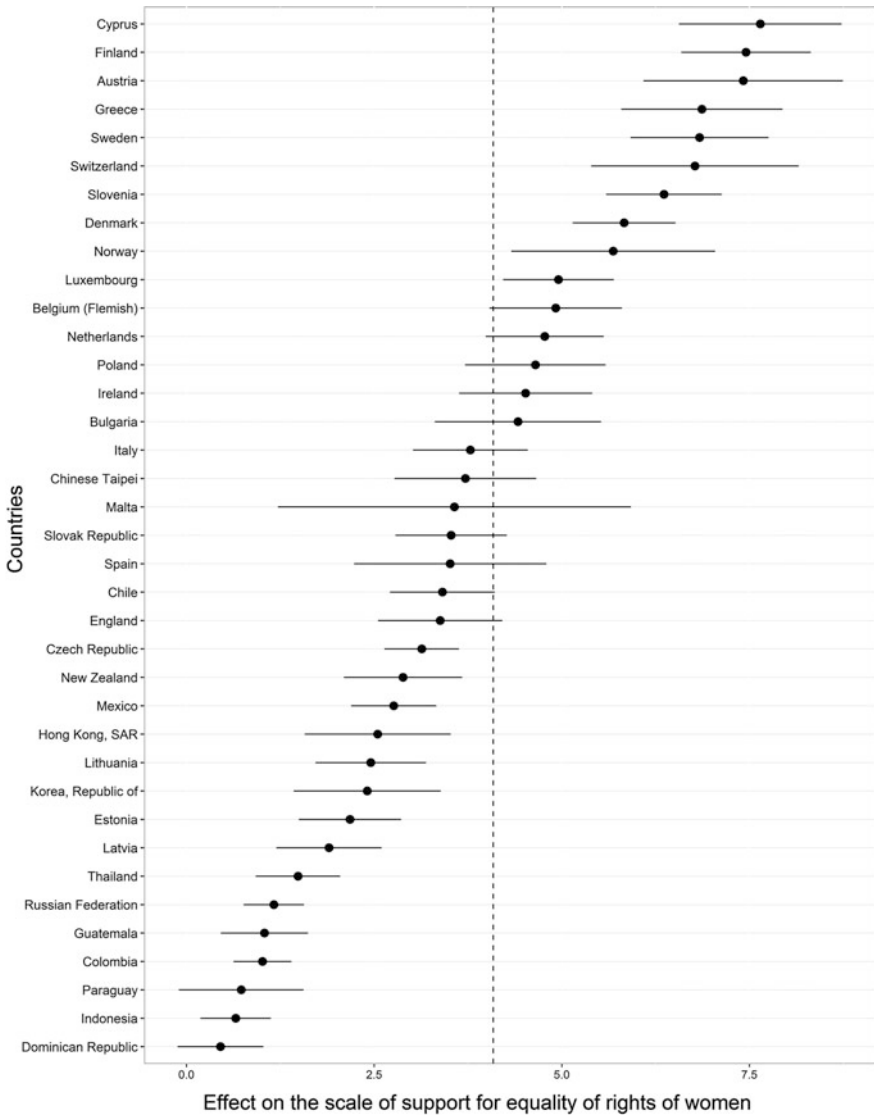
Fig. 4.2 Differences in attitudes toward equal rights for women between female and male students across countries. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

relationship ranged from 0.73 to 6.21, demonstrating that attitudes toward equal rights for all ethnic groups varied substantially between female and male students.

The intergroup contact theory is not generally proven in these analyses because the relationships between attitudes toward equal rights for all ethnic groups and the
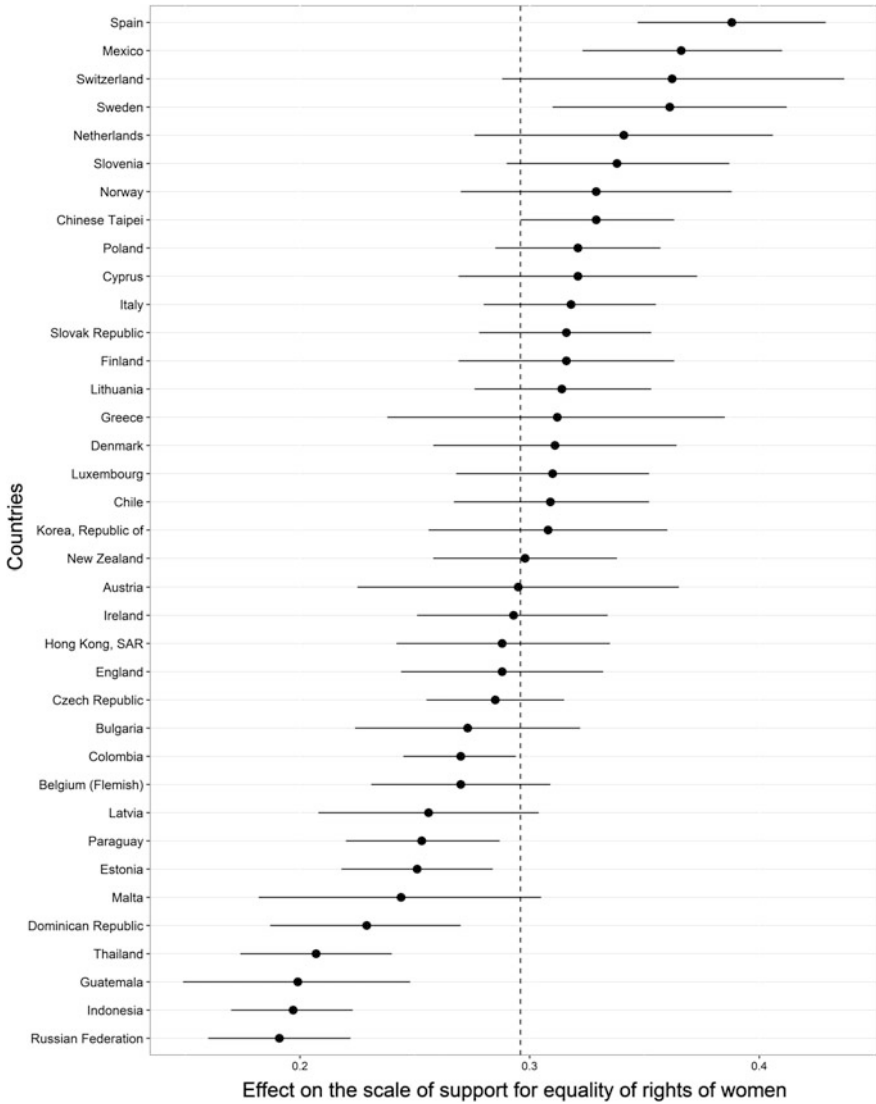
Fig. 4.3 Coefficients of students' support of democratic values as predictor of attitudes toward equal rights for women. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

percentage of students from ethnic groups in the school were not statistically significant in the majority of the countries. This relationship is significant in eight countries, but associations differ. For example, in Indonesia, Lithuania, Luxembourg, and the Netherlands there was a negative relationship between the

Table 4.3 Percentage of students defining themselves as being from non-mainstream ethnic groups in ICCS 2009

Country	% of students from non-mainstream ethnic groups	Country	% of students from non-mainstream ethnic groups
Austria	1.70	Korea, Republic of	0.40
Belgium (Flemish)	3.80	Latvia	8.30
Bulgaria	10.80	Liechtenstein	1.50
Chile	0.70	Lithuania	3.60
Chinese Taipei	17.00	Luxembourg	54.30
Colombia	0.80	Malta	14.30
Cyprus	3.70	Mexico	2.40
Czech Republic	0.70	Netherlands	4.30
Denmark	0.70	New Zealand	1.20
Dominican Republic	1.90	Norway	1.40
England	1.10	Paraguay	36.10
Estonia	2.60	Poland	1.40
Finland	2.00	Russian Federation	7.30
Greece	0.80	Slovakia	4.30
Guatemala	5.20	Slovenia	1.60
Hong Kong, SAR	1.20	Spain	13.40
Indonesia	61.40	Sweden	1.00
Ireland	2.80	Switzerland	5.10
Italy	0.80	Thailand	4.20

Note Across all countries, 18.40% of students defined themselves as part of a non-mainstream ethnic group

percentage of students from ethnic groups and the attitudes of students toward them. Conversely, in Korea, Switzerland, the Dominican Republic, and the Czech Republic there was a positive relationship between these two variables, indicating that the higher the percentage of students from ethnic groups, the more positive the attitudes toward them. It is important to consider two elements in interpreting these results. First, the proportion of students from a non-mainstream ethnic background in the sample was rather low in several countries, and this may be biasing some results. Second, countries may consist of pluri-ethnic societies, meaning that they are composed of a multiplicity of different ethnic groups, and the conceptions of students from different ethnic and mainstream groups may be shaped by relationships between specific groups within the wider social context, at the national level.

This situation may require further investigation if attitudes toward ethnic groups are assumed to be shaped by student notions about the groups that integrate into their societies.

There are two variables related to student experiences in the school that demonstrated a robust relationship with attitudes toward equal rights for all ethnic groups. Student perceptions that there is a classroom environment open to classroom discussions were generally related to positive attitudes toward equal rights for all ethnic groups. Bulgaria and Korea were the only countries where the relationship between these two variables was not statistically significant. The lack of significant associations in these two countries may be due to the low levels of ethnic diversity in these countries. The statistical significance of this variable across countries was 0.041–0.132.

Student perceptions of the value of participation at school was the other variable directly related to positive attitudes toward equal rights for all ethnic groups (Fig. 4.4). This variable was significantly related to attitudes in all the countries, with a range of 0.07–0.28 across all countries.

Civic interest variables were positively associated with attitudes toward equal rights for all ethnic groups. Student support for democratic values was the most robust predictor of positive attitudes toward ethnic groups (Fig. 4.5), and was statistically significant in all the sampled countries. This relationship had values that ranged from 0.15 to 0.39, meaning that within these values is the observed rate of change on attitudes toward equal rights for all ethnic groups for a one unit change in the index of support for democratic values. Student interest in politics and social issues maintained a positive and significant relationship with attitudes toward equal rights for all ethnic groups in 27 out of the 37 countries analyzed, with coefficients ranged between 0.05 and 0.21 (Fig. 4.6). Instead, in Chinese Taipei, Colombia, Estonia, Hong Kong, Luxembourg, the Netherlands, New Zealand, Paraguay, Slovakia and Slovenia the effect was not significant.

When we examined the structural characteristics of the school, the average socioeconomic status of the school was the best predictor of attitudes toward equal rights for all ethnic groups; this variable was statistically significant in 19 countries. In those countries where the relationship between the school average socioeconomic status and attitudes toward ethnic groups was statistically significant, the coefficient values varied from 0.77 to 3.06 on the scale of support for equal rights for all ethnic groups.

4.4.3 Attitudes Toward Equal Rights for Immigrants

When analyzing attitudes toward equal rights for immigrants, users need to understand the limitations of the data. The ICCS data reports rather small proportions of immigrant students in each country. Bulgaria, Chile, Chinese Taipei, Colombia, Korea and Slovenia reported proportions of immigrant students below 1% at national level. This is a caveat for the analyses, since some of the coefficients
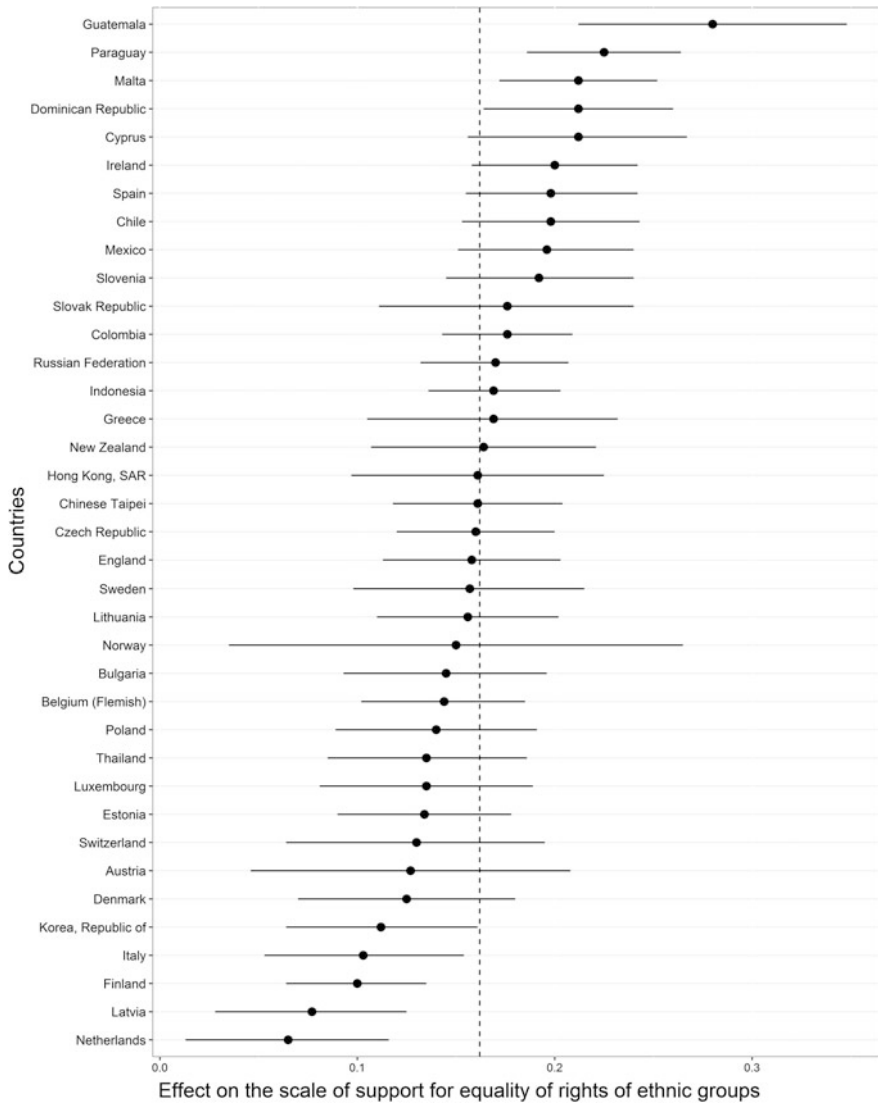
Fig. 4.4 Coefficients of students' perceptions of the value of participation at school as predictor of attitudes toward equal rights for all ethnic groups. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

may be biased due to the low percentages of immigrant students in some of the countries (Table 4.4).

The models for the analysis of attitudes toward equal rights for immigrants show, again, that female students had more positive attitudes toward these
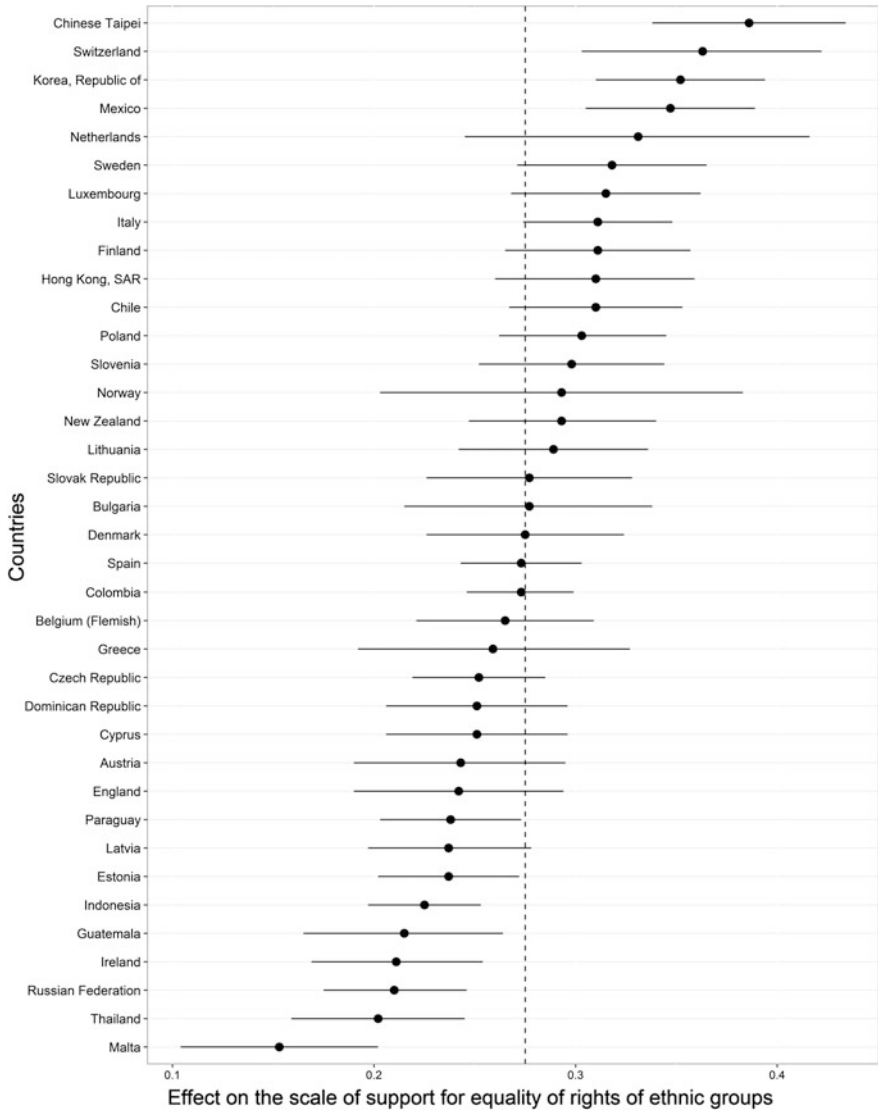
Fig. 4.5 Coefficients of students' support of democratic values as predictors of attitudes toward equal rights for all ethnic groups. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

population groups. Results showed that girls held more positive attitudes toward immigrants, with values ranging between 0.79 and 6.61 points in 30 countries on the scale of attitudes toward equal rights for immigrants. In the Dominican
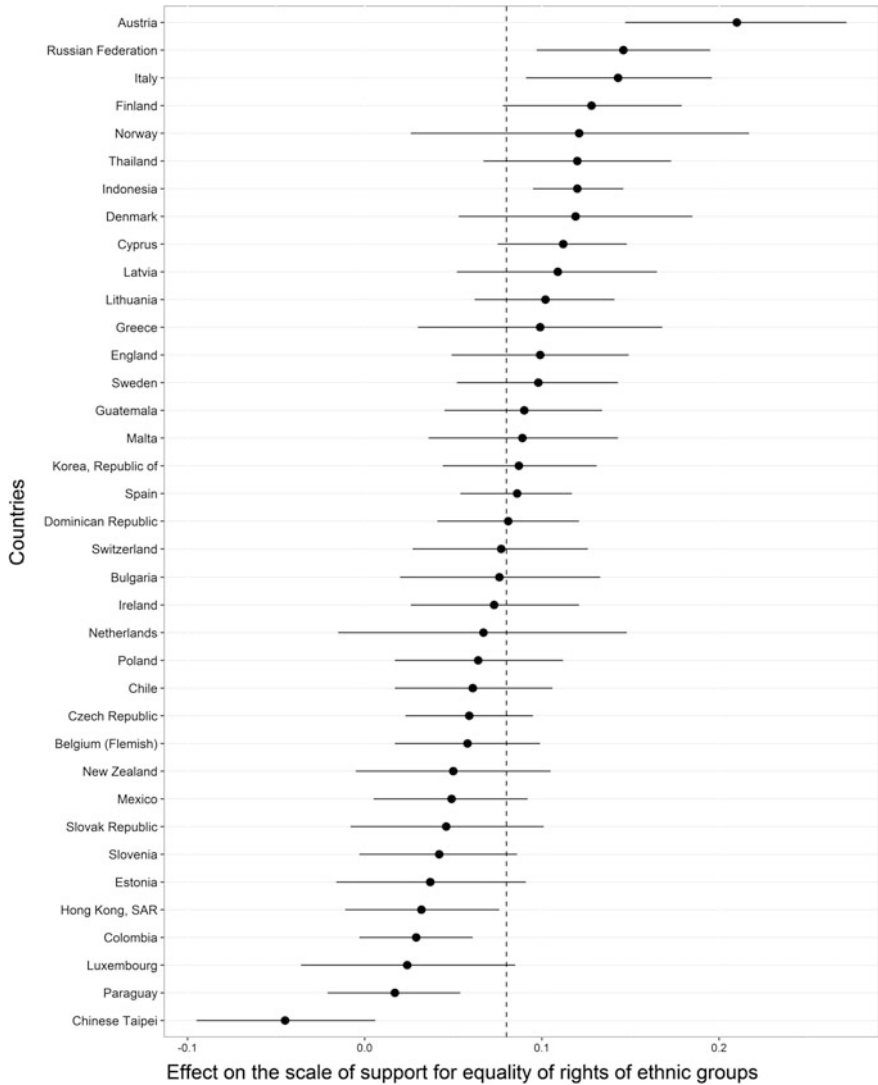
Fig. 4.6 Coefficients of students' interest in politics and social issues as predictors of attitudes toward equal rights for all ethnic groups. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

Republic, Guatemala, Hong Kong, Indonesia, Malta, Paraguay and Thailand there were no statistically significant differences between female and male students.

In 20 countries, as expected, immigrant students showed higher levels of attitudes toward equal rights for immigrants than non-immigrant students. The magnitude of

Table 4.4 Percentage of immigrant students in ICCS 2009 by country

Country	% immigrant students	Country	% immigrant students
Austria	19.38	Korea, Republic of	0.05
Belgium (Flemish)	10.72	Latvia	4.91
Bulgaria	0.73	Liechtenstein	34.34
Chile	0.73	Lithuania	1.68
Chinese Taipei	0.78	Luxembourg	43.14
Colombia	0.51	Malta	1.87
Cyprus	7.12	Mexico	1.77
Czech Republic	2.47	Netherlands	13.27
Denmark	8.65	New Zealand	23.26
Dominican Republic	2.03	Norway	10.20
England	14.91	Paraguay	1.96
Estonia	6.86	Poland	1.45
Finland	2.36	Russian Federation	5.66
Greece	11.32	Slovak Republic	0.73
Guatemala	1.74	Slovenia	10.16
Hong Kong, SAR	35.87	Spain	11.13
Indonesia	1.28	Sweden	13.86
Ireland	12.08	Switzerland	24.01
Italy	7.26	Thailand	1.39

Note Across all countries, on average 4.01% of students were defined as immigrants

such relationships varied between 1.27 and 8.97 points on the scale of attitudes toward equal rights for immigrants. In Chinese Taipei, Colombia, the Dominican Republic, Estonia, Guatemala, Hong Kong, Indonesia, Korea, Latvia, Lithuania, Luxembourg, Malta, Mexico, Paraguay, Poland and Thailand, immigrant and non-immigrant students showed no differences in their attitudes toward immigrants, after controlling for all the variables included in the model.

Non-immigrant students demonstrate that the intergroup contact hypothesis for immigration held only for 10 out of the 37 participating countries, but with important differences. In seven countries, there was a positive relationship between the percentage of immigrants in the school and the attitudes toward this population, in accordance with the intergroup contact theory. These countries (with the magnitude of the effects in parentheses) were Thailand (2.71), Lithuania (5.01), Switzerland (5.03), Sweden (5.79), Denmark (5.84), Estonia (9.46), and Latvia (12.20). Conversely, in Korea (−65.39), Luxembourg (−49.02) and Indonesia (−4.33) there were negative associations between the percentage of immigrants in the school and the attitudes toward this population group. The coefficient of Korea may be a statistical artifact created by the low levels of immigration in this particular country.
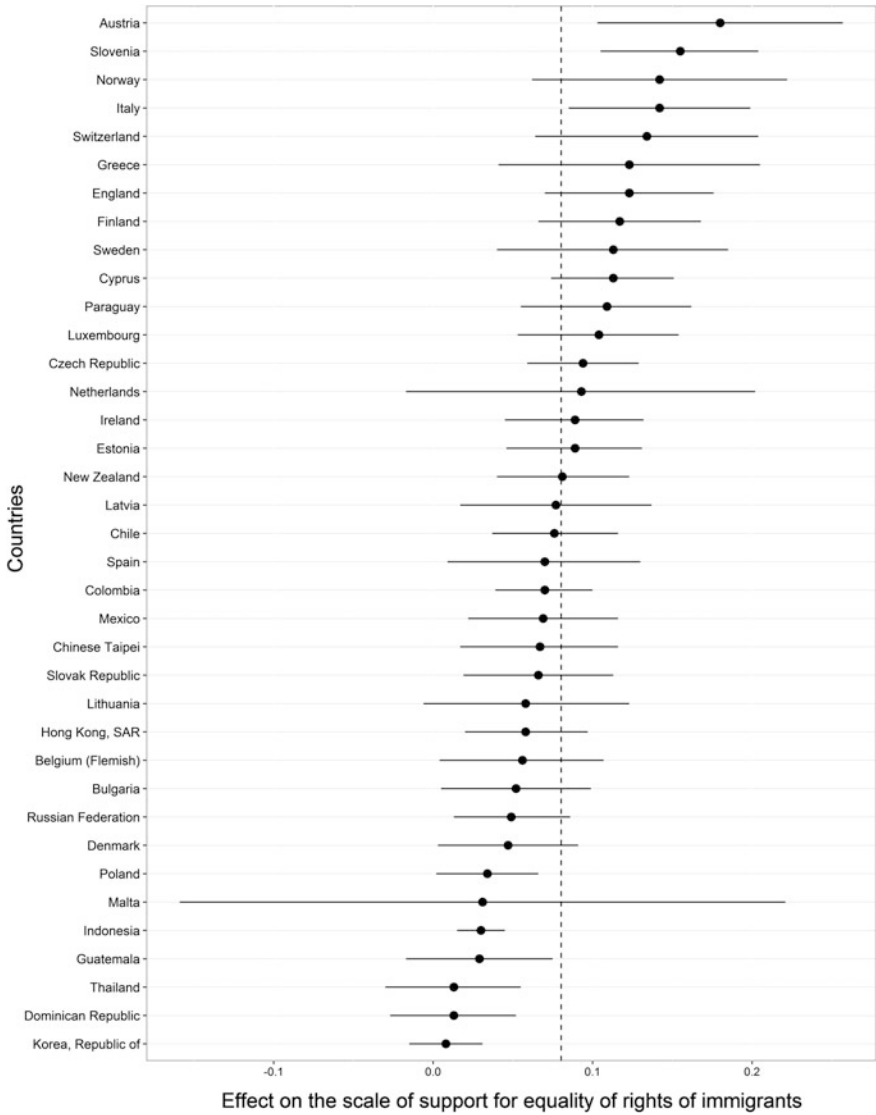
Fig. 4.7 Coefficients of students' perceptions of open classroom climate for discussion as predictor of attitudes toward equal rights for immigrants. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

There are two variables related to the students' experience in school that are directly associated with attitudes toward equal rights for immigrants. Firstly, student perceptions of a more open classroom climate were significantly related to attitudes toward equal rights for immigrants in 30 countries (Fig. 4.7). The magnitude of this

association varies between 0.03 and 0.18 across countries. It is important to note that an open classroom climate is not significantly related to attitudes toward equal rights for immigrants in the Dominican Republic, Guatemala, Korea, Lithuania, Malta, the Netherlands and Thailand. Secondly, student perceptions of the value of student participation in civic-related activities at school also positively predicted attitudes toward equal rights for immigrants in 34 countries, with a magnitude ranging from 0.06 to 0.24. Latvia, the Netherlands and Norway were the only countries where the relationship between these two variables was not statistically significant (Fig. 4.8).

In the area of civic interest, there were also three variables that were related to attitudes toward equal rights for immigrants. First, student support for democratic values was the variable that most robustly predicted attitudes toward equal rights for immigrants across all the countries. The magnitude of this association ranged from 0.12 to 0.37 (Fig. 4.9). Second, student interest in politics and social issues also predicted attitudes toward equal rights for immigrants in 25 countries (Fig. 4.10), with a range of effects starting at 0.04 with a maximum of 0.20. In Bulgaria, Chinese Taipei, Colombia, Hong Kong, Latvia, Luxembourg, Malta, the Netherlands, Paraguay, Slovakia, Slovenia and Spain there was no significant relationship between these two variables. Finally, student attitudes toward their country also predicted attitudes toward equal rights for immigrants in 25 countries, although relationships differed. There was a negative relationship between student attitudes toward their country and attitudes toward equal rights for immigrants in Sweden (−0.15), Switzerland (−0.14) and Austria (−0.09). In the other 22 countries, there were positive relations between attitudes toward the country and attitudes toward immigrants with a range of magnitude of 0.06–0.22. In Denmark, England, Estonia, Finland, Ireland, Italy, Latvia, Luxembourg, the Netherlands, Norway and Spain there were no statistically significant relationships between these two variables.

In relation to structural features of the school, there are two variables that deserve attention. Firstly, there was a significant relationship between the average socioeconomic status of the school and attitudes toward immigrants in 15 countries. In 14 of them, the association was positive, with a magnitude that ranged between 0.92 and 3.10 across countries. Latvia was the only country where there was a negative association between the average socioeconomic status of the school and attitudes toward equal rights for immigrants, with a coefficient of 0.97.

Secondly, in nine countries (Bulgaria, Estonia, Slovakia, Finland, Ireland, the Dominican Republic, Chile, Luxembourg and Lithuania), private school students had significantly lower attitudes toward equal rights for immigrants than public school students. In the Czech Republic, private school students showed more positive attitudes toward equal rights for immigrants than public school students. It is important to remember that these findings were derived from multivariate models that control for a set of student and school-level variables.
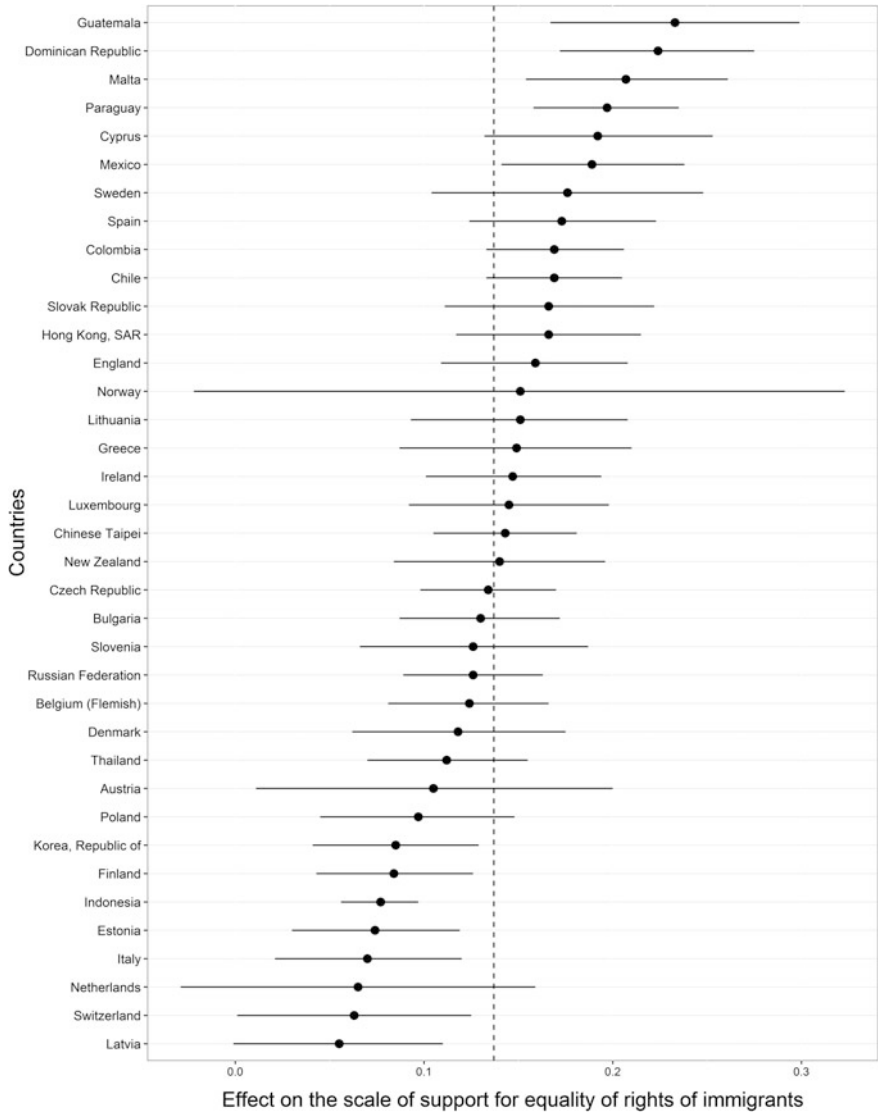
Fig. 4.8 Coefficients of students' perceptions of the value of student participation in civic-related activities at school as predictor of attitudes toward equal rights for immigrants. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average
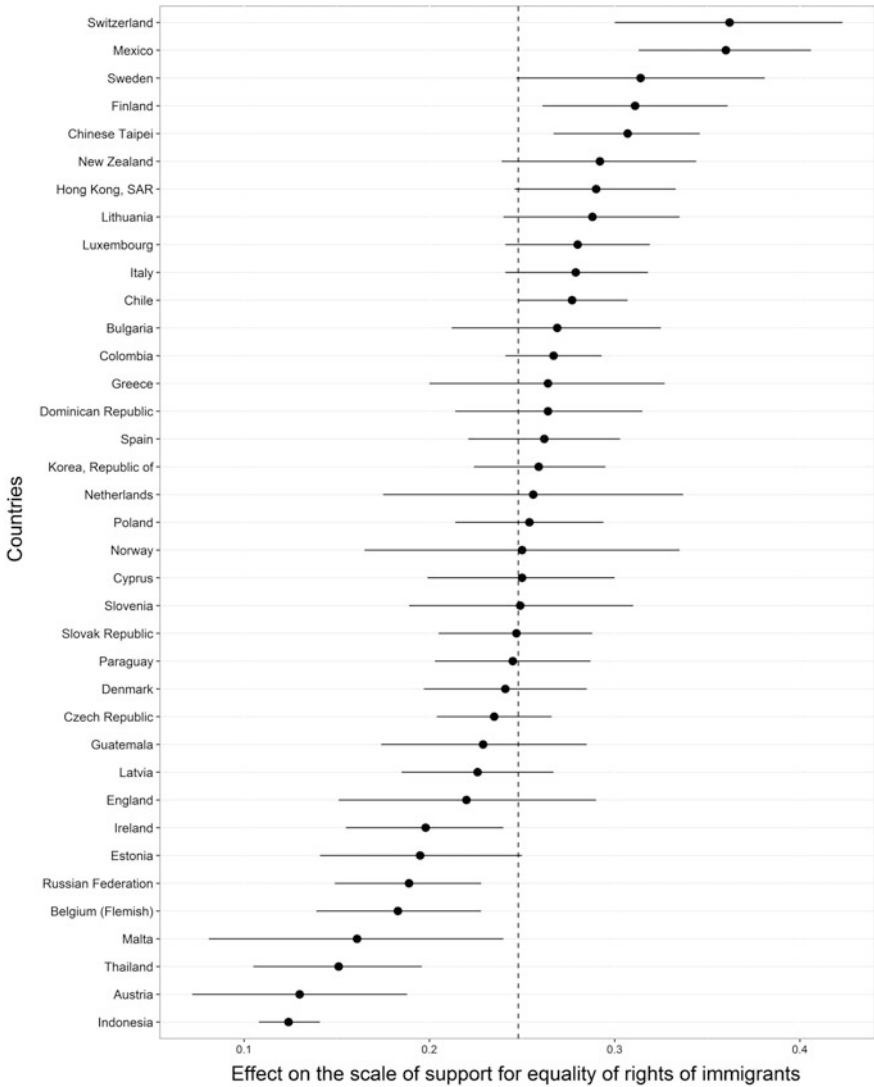
Fig. 4.9 Coefficients of students' support of democratic values as predictors of attitudes toward equal rights for immigrants. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

4.5 Discussion and Conclusions

The findings of this chapter suggest that attitudes toward equality in diverse settings have both commonalities and differences across countries.
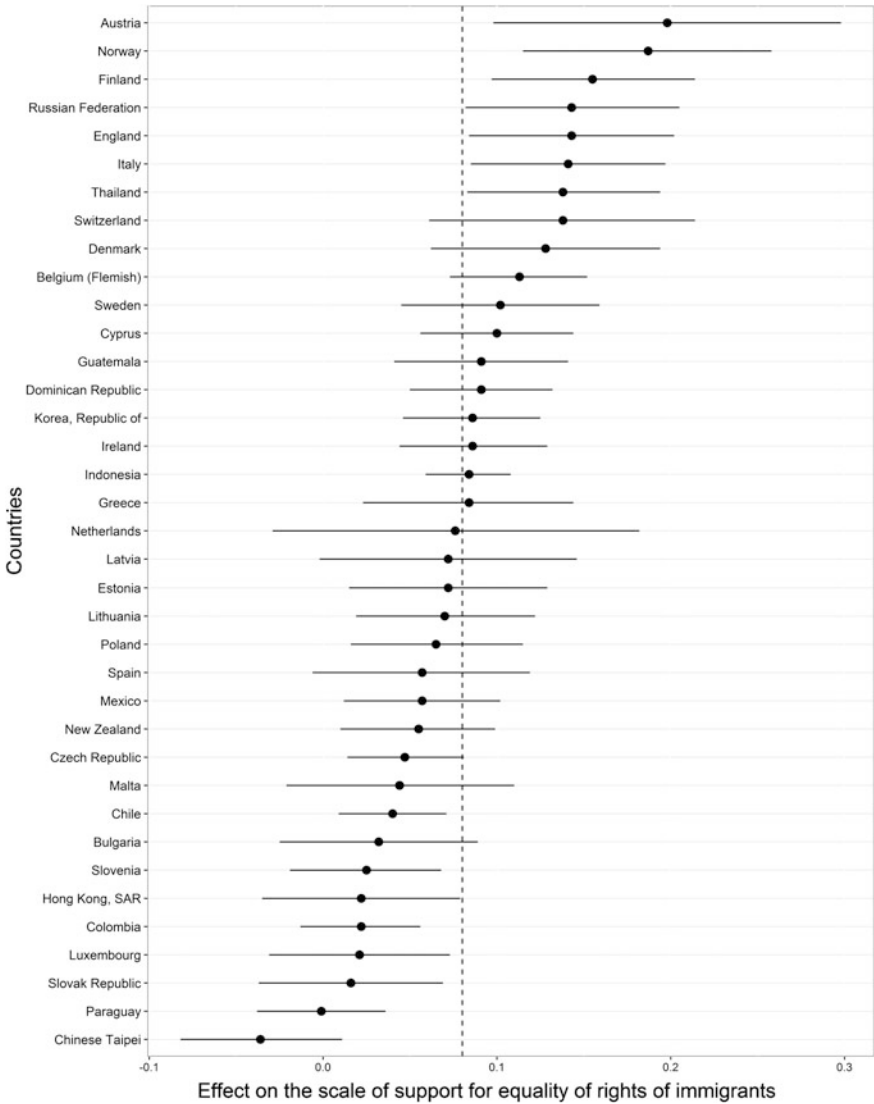
Fig. 4.10 Coefficients of students' interest in politics and social issues as predictor of attitudes toward equal rights for immigrants. The estimated effect for each country is indicated by a point on the scale of the dependent variable. The lines represent the confidence interval of each estimate. The dotted line indicates the country average

The first conclusion of these analyses is that female students, in general, hold more positive attitudes toward diversity than male students. This implies that girls may be crucial actors in leading the conversations on equal rights for diverse groups in schools.

The intergroup contact theory was only partially confirmed. The analyses showed that there was a positive relationship between students' attitudes toward equal rights for women and the percentage of females in the school in only four countries, meaning that the higher the proportion of female students in the school the more positive the attitudes toward gender equality. However, the lack of a positive association between attitudes toward equal rights for women and the percentage of female students in the school may be a consequence of the configuration of school systems, which tend either to have similar percentages of girls and boys in the same school or single-sex schools for boys and girls. In either of these two cases, it may be difficult to find significant associations because the percentages of girls and boys across school may be almost constant.

Looking at attitudes toward equal rights for all ethnic groups, intergroup contact theory provided contradictory findings in eight countries. In four countries (Indonesia, Lithuania, Luxembourg, and the Netherlands) there was a negative relationship between the percentage of students from ethnic groups and student attitudes toward them, while in four other countries (Korea, Switzerland, Dominican Republic and the Czech Republic) the association was positive. However, it is important to consider both that the proportion of ethnic minorities in school in several countries was low and that it was not clear if there was a threshold of diversity in the school that may be associated with more positive attitudes toward equality among ethnic groups. Also, in pluri-ethnic societies, the attitudes toward equal rights for all ethnic groups may be shaped by relationships between specific groups within the country.

The intergroup contact hypothesis for immigration held in 10 countries, but we observed differing relationships between the percentage of immigrants in school and student attitudes toward equal rights for immigrants. In seven countries (Thailand, Lithuania, Switzerland, Sweden, Denmark, Estonia, and Latvia) there was a positive relationship, while in three countries (Korea, Luxembourg and Indonesia) there was a negative association. Again, the results may be shaped by local particularities regarding the relationship of society with immigrants, as well as with the distribution of immigrants across schools.

An open classroom climate for discussion and the value that students place on their participation in civic activities at school were the two school variables with a general relationship with attitudes toward equality. An open classroom climate for discussion was directly linked to student attitudes toward equal rights for women in 30 countries (the exceptions were the Dominican Republic, Guatemala, Korea, Lithuania, Malta, the Netherlands, and Thailand), was associated with attitudes toward equal rights for all ethnic groups in 35 countries (the exceptions being Bulgaria and Korea), and was significantly linked to attitudes toward equal rights for immigrants in 30 countries (with the Dominican Republic, Guatemala, Korea, Lithuania, Malta, the Netherlands and Thailand being the exceptions to this trend). Student perceptions of the value of their participation in civic related activities at school were also generally linked to attitudes toward diversity. This variable was positively associated with attitudes toward equal rights for women in 34 countries (the exceptions being Latvia, the Netherlands and Norway), was linked to positive

attitudes toward equal rights for all ethnic groups in all the countries, and was positively associated with attitudes toward immigrants in 34 countries (the exceptions being again Latvia, the Netherlands and Norway).

Student support for democratic values and their interest in social and political issues are two elements that generally positively predicted attitudes toward diversity. Student support for democratic values was positively associated with attitudes toward equal rights for women, for all ethnic groups and for immigrants in all the countries analyzed. Student interest in social and political issues also predicted attitudes toward equal rights for all ethnic groups and for immigrants, but did not robustly predict attitudes toward equal rights for women. This variable was positively associated with attitudes toward equal rights for all ethnic groups in 27 countries (with the exceptions being Chinese Taipei, Colombia, Estonia, Hong Kong, Luxembourg, the Netherlands, New Zealand, Paraguay, Slovakia and Slovenia) and significantly associated with attitudes toward equal rights for immigrants in 25 countries (with the exception of Bulgaria, Chinese Taipei, Colombia, Hong Kong, Latvia, Luxembourg, Malta, the Netherlands, Paraguay, Slovakia, Slovenia and Spain). This means that, in most cases, students' civic attitudes play a role in promoting more positive attitudes toward equality of different population groups.

The average socioeconomic background of the school was related to attitudes toward diversity, although the relationship was less robust than those associated with civic interest (support for democratic values and interest in social and political issues). The socioeconomic composition of the school was positively associated with attitudes toward equal rights for women in 22 countries, linked to attitudes toward equal rights for all ethnic groups in 19 countries, and associated with attitudes toward equal rights for immigrants in 14 countries; in this last case, there was a negative association between socioeconomic background and attitudes toward equal rights for immigrants in Latvia.

Attending a private school is also related to attitudes toward diversity in several countries. In Bulgaria, the Slovakia, the Russian Federation, the Dominican Republic and Finland students attending private schools showed less positive attitudes toward equal rights for women than students attending public schools. Private school students in the Dominican Republic and Finland showed less positive attitudes toward equal rights for all ethnic groups, while, in the Czech Republic, private school students showed more positive attitudes toward these groups. In nine countries (Bulgaria, Estonia, Slovakia, Finland, Ireland, Dominican Republic, Chile, Luxembourg and Lithuania), private school students had significantly less positive attitudes toward equal rights for immigrants than public school students, while, in the Czech Republic, private school students showed more positive attitudes toward equal rights for immigrants than public school students.

The findings suggest several implications for research, policy and practice. From a research perspective, individual country analyses may provide more specific contextual explanations, revealing information on the organization of school systems, the policies and curriculum in place in each country, the distribution of students across schools and the societal trends in terms of attitudes toward diversity. It may also be interesting to research whether there are thresholds of diversity in schools that

are linked to more positive student attitudes. In this regard, it is possible that there might be thresholds associated with more positive attitudes for the percentages of female, ethnic minority and immigrant students in schools, or, put in a different way, segregation of students by ethnic or immigrant background or by gender across schools may lead to differences in attitudes toward diversity.

Policy implications include the educational system but extend to the wider society. First, an open climate for classroom discussions and genuine student participation in civic related activities at school show consistent associations with attitudes toward diversity. It seems, therefore, that schools have an influence on attitudes through their specific democratic and teaching practices. Second, it is important to note that the school system does not necessarily cluster students by their types of attitudes toward diversity, as it may occur, for example, with the case of socioeconomic status. This is clear because $\geq 90\%$ of the variation in attitudes occurs within schools. Such a situation poses an important question for further research into the relative weights that schools, families, friendships and media play in shaping attitudes toward diversity among students. Third, at a societal level, it is important to establish channels of genuine participation and influence in decision making, following democratic procedures, in a way that families and students can foresee the importance of developing participatory procedures in the school and interest in democracy and social issues. Furthermore, fostering an interest in political and social issues, and democratic values must be accompanied by concrete ways of applying such skills in the communities where families live in order for students to appreciate the value of any socialization effort in this direction.

There are some implications for practice that should be noted with care, since they are derived from an observational and not a causal inference study. On the one hand, it seems necessary to develop pre-service and in-service teacher training programs that provide teachers with the necessary tools to design and productively manage open classroom discussions. Furthermore, such programs should not be confined to a specific discipline, but can foster the notion of an open climate for classroom discussion across disciplines. On the other hand, schools need to develop appropriate practices to allow and foster open classroom discussions, besides designing and implementing genuine forms of participation for students. These forms of participation may entail students working together with others, respecting both the points of view of others and the results of democratic processes.

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Chapter 5
School Segregation of Immigrant Students

Cristóbal Villalobos, Ernesto Treviño, Ignacio Wyman and Consuelo Béjares

Abstract IEA's International Civic and Citizenship Education Study (ICCS) identifies first- and second-generation immigrants, and hence may reveal patterns of segregation of immigrant students. From a comparative perspective, these may be analyzed to provide the distribution, concentration and spread of immigrant students among schools and countries. Here three methods of analysis were employed: (1) descriptive analysis, (2) construction of segregation indices, and (3) multilevel analysis. In general, countries do not implement systematic policies to concentrate or segregate immigrant students, although there are important differences between countries; instead there is a need to appreciate strong relationships between levels of segregation and inequality or human development indexes, and consider geographical, cultural and economic factors. Schools appear to have a limited effect in transforming attitudes toward immigration.

Keywords Immigration · International Civic and Citizenship Education Study (ICCS) · International large-scale assessments · School segregation

5.1 Introduction

Historically, migrations have occurred throughout human history and are a relevant social phenomenon in the field of social research. However, the dynamics, magnitudes and effects of immigration make this one of the most complex issues in

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contemporary society (Potts 1990; Sassen 2014). Although still a topic of debate, here we define immigration as any movement of people from their country of origin to a different country due to political, social, economic, religious, or other situations.

Interpretations of immigration have generated intense academic debate in recent decades. In some cases, immigration is understood as part of a process of displacement of workers from various regions of the world, caused by the international division of labor and the construction of a world economy (Harvey 2007; Robinson 2004). In other cases, immigration is understood as the product of globalization processes and the increase of networks and relations between countries, thus acquiring a cultural perspective (Castells 2010; Pries 2008). Some researchers understand immigration as a process that accounts for the loss of the importance of the nation state and the reconfiguration of national barriers and forms of state control, especially potent in recent decades (Castles and Miller 2008; Sassen 2005, 2014). Finally, some research has focused on migration as displacements produced by conflicts and wars between or within nations. Beyond these interpretations, immigration has become consolidated in the world as a phenomenon of increasing magnitude and importance (Garay et al. 2015; Texidó et al. 2012). Consequently, different researchers have been clear in showing the need to comprehend the phenomenon of immigration as a political process in which important social, economic, cultural and power differences between groups are produced and reproduced (Perliger et al. 2006; Witschge and Van de Werfhorst 2016).

Schools continue to play a fundamental role in the processes of socialization and social interaction (Brint 2006). Thus, contemporary schools continue to be one of the most common spaces where children can share and socialize with subjects of their own origins, constituting a privileged space for the formation of civic attitudes, including respect for diversity, inclusion of different groups, tolerance toward others, social cohesion and the incorporation of democratic values (Shafiq and Myers 2014).

Here, we analyzed the pattern of segregation of immigrant students from a comparative perspective using the data from the International Civic and Citizenship Education Study (ICCS) 2009. We discuss the distribution, concentration and spread of immigrant students among schools and countries, in order to understand how education systems generate mechanisms to include (or exclude) these students. After presenting a conceptual background to the phenomenon of school segregation, explaining the concept of immigrant and the conceptual link between these two research lines, we describe the methodology, accounting for the variables selected, the segregation index used and the strategy of data analysis. The results provide information on the patterns of distribution of immigrant students, the levels of segregation of immigrant students in the countries, and the relationship between levels of segregation and attitudes toward immigrants. In the conclusion, we reflect further on educational policies designed to promote the inclusion of immigrant students.

5.2   Conceptual Background

5.2.1   School Segregation: An Overview

Segregation can be defined as "a measure of the inequality of the distribution of characteristics of individuals among organizational units" (Gorard and Taylor 2002, p. 877). In the educational field, segregation is understood as that process of separation of students according to some social, cultural, academic or racial condition. Dupriez (2010) identified three units where school segregation can occur: within classrooms in a school; between classrooms in the same school; and between schools. However, comparative research has focused especially on between-school segregation, using data from different large-scale assessments, such as the IEA's Trends in Mathematics and Science Study (TIMSS) and ICCS, and the Organisation for Economic Co-operation and Development's (OECD) Programme for International Student Assessment (PISA) (Chmielewski and Savage 2015; Duru-Bellat and Suchaut 2005; Janmaat 2014; Montt 2011; Willms 2010).

In general, the accumulated evidence has shown clearly that between-school segregation (especially that based on socioeconomic variables) has negative effects in the short, medium and long term on the quality and equity of educational systems (Boger and Orfield 2009; Gorard and Fitz 2000). For this reason, many researchers, policymakers and politicians have learned the processes and mechanisms related to educational segregation, and have made significant efforts to design programs and policies aimed at decreasing levels of segregation in school systems.

Conceptually, educational segregation impacts the configuration of the field on at least three levels: the individual level, school level, and societal level. First, at an individual level, the intergroup contact theory (Allport 1954; Pettigrew 1998; Pettigrew and Tropp 2006) has indicated that students exposed to higher levels of diversity at school (also meaning lower levels of segregation) will develop higher levels of tolerance, more positive attitudes toward minorities and lower levels of prejudice. Different studies have analyzed these relationships, with dissimilar results. Rao (2014) found that levels of generosity, cooperation and friendliness increase when heterogenization processes are generated in schools. Further, Moody (2001) suggested that students attending segregated schools exhibit less capacity to form friendships with students who have different characteristics to their own. Other empirical studies have revealed that the effect of segregation on different attitudes toward diversity is less clear and linear, although it is generally recognized that there is at least an indirect effect on this relationship (Janmaat 2015; Shafiq and Myers 2014).

Secondly, educational segregation influences school organization and outcomes. For example, there is evidence that suggests a relationship between school segregation and the distribution of teachers in the school system (Kelly 2007). In general, teachers with less experience and fewer qualifications more frequently teach in schools that educate the poorest social groups (Clotfelter et al. 2005, 2006). In

addition, the concentration of vulnerable students affects educational achievement (Borman and Dowling 2010) and opportunities for learning (Breen and Jonsson 2005), as it generates less challenging classes and educational environments with less diverse experiences, especially affecting the most disadvantaged and vulnerable students. Likewise, relevant school indicators, including expulsion rates, repetition rates, school climate, and disciplinary measures are affected by school segregation (Freeman and Steidl 2016).[1]

Finally, international evidence shows the impact of school segregation on different social issues, such as the quality of democracy or levels of inequality. For example, Dupriez et al. (2008) used data from PISA to reveal the positive relationship that exists between socioeconomic segregation and inequality in schools, where countries with high levels of inequality tend to have high levels of segregation in their school systems. Additionally, evidence shows that the separation of students in schools, and the consequential homogenization of school populations, might have a detrimental effect on the quality of citizenship and civic attitude, in turn creating higher levels of social conflict (Corvalan and Vargas 2015; Esteban and Ray 2011). In this sense, the construction of schools with high social, cultural and economic diversity is a challenge that goes beyond the school system, affecting societies in the short, medium and long term.

5.2.2   The Immigrant Condition: Conceptual Background

From Simmel's seminal studies on forms of socialization (Simmel 1977), Elias's (2000) research on figurations and the process of civilization, and Schutz's (2013) studies of social interaction, the notion of immigrant has been constituted as a central reference for the discussions of western social theory. In general, it is possible to recognize three main elements that must be considered to understand the concept of what it is to be an immigrant.

First, different researchers have shown how the concept of what it is to be an immigrant is constructed through processes of interaction and subjectivity (Schutz 1970). Even though many legal definitions have been sketched of what it is to be an immigrant, the fact is that the notion of immigrant is based mainly on social imaginaries that construct people and societies (Taylor 2004). These imaginaries are based on the generation of a fundamental difference: the distinction between "we" and "others" generated around the distinction between the "national" versus "non-national" condition (Tororov 2010). In this way, the phenomenon of immigration contains differentiating elements such as the country of origin and

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[1]Evidence also shows that the students from segregated schools that continue onto higher education have lower performance in their careers, earn less money and have poorer health; all this reflecting the long-term effects of segregation (Orfield et al. 2012). In contrast, students who have been in integrated schools have a higher probability of searching for and finding more integrated universities, neighbourhoods, and places of work (Mickelson 2001).

nationality, through which different subjects are valued and positioned differently. In short, this implies that the notion of an immigrant is shaped by what Anderson (2006) has named "imagined communities", that is, social groups of people perceiving themselves as part of a certain social group, generating processes of cultural and social differentiation/homogenization that underlie the notion of immigrant.

Secondly, and related to the above, social theorists have shown that not all people from other countries or cultures are equally qualified as immigrants. As Simmel (2002) has shown, there is a difference between foreigner and immigrant. The foreign seems to be related to two notions: that of tourist (person who is temporarily visiting elsewhere) and that of people from different countries of origin that come to reside in the medium or long term, but whose origin and nationality is more valued by the society of destiny. In contrast, the notion of immigrant operates to denominate those nationalities undervalued in the societies they move to, by enclosing a set of properties that usually attribute negative characteristics. In this way, the notion of immigrant is constituted as a negative concept (Adorno 1984) meaning, a concept created based on a negative difference with some part of social reality. This implies that, in short, immigrant status is constructed by each country, according to its history and for the categories of domination existing in each nation-state (Sayad 2008).

Finally, it is important to account for the relationship between the notion of immigrant and other dominated groups in society. In general, it is recognized that the immigrant is a subject that has a disadvantage in the societies in which they encounter, suffering from patterns of vulnerability, social exclusion and marginality produced by institutional factors and by processes of social differentiation and segregation. For this reason, it is possible to understand immigration as part of a complex of relationships in which nationality, ethnicity and class are entangled as factors that determine the structural inequalities of social stratification and differentiation systems (Costa 2013). This implies that nationality is not simply a proxy for vulnerability, poverty or exclusion, but neither is a variable independent of the economic, social and cultural characteristics of subjects. Following Bourdieu (1997), this would imply that nationality is an asset or deficit, depending on cultural, social, economic, political, moral and religious characteristics of the social field.

5.3 Methods

5.3.1 Data

The principal data are taken from the International Civic and Citizenship Education Study (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.

5.3.2 Variables

Dependent Variables

In order to account for the immigrant status of the students, we analyzed the responses from the ICCS 2009 student questionnaires. In this questionnaire, three items ask about the immigration status of: (1) the student, (2) the mother or female guardian of the student, and (3) the father or male guardian of the student. The combination of possible responses to these items results in four types of students: (1) non-immigrant students, (2) students with one or two immigrant parents, but born in the country of destination (second-generation immigrants), (3) students born outside the country, but whose parents were born in the country of destination (first-generation immigrant, with non-immigrant parents), and (4) students born outside the country and with parents from other countries (first-generation immigrant, with immigrant parents).

In this way, we attempted to capture the discussion about the differentiated effects of first and second-generation immigration (Portes and Rumbaut 2001; Van Ours and Veenman 2003). However, considering the distribution of these "types" of immigration (see Fig. 5.1), we used a dichotomous variable to identify the immigrant students for the analyses involving the segregation index and multilevel models (where 0 indicates a non-immigrant student and 1 an immigrant student).

Additionally, and to explore the effect of immigrant segregation, we used a variable measuring the students' attitudes toward equal rights for immigrants, which was estimated using confirmatory factor analysis (CFA) and with invariance testing (for a more detailed description of the procedures followed to construct these variables, see Chap. 3 in this volume).

Independent Variables

To explore the relationship between the level of immigrant segregation and some country variables, we also used secondary data related to the magnitude of inequality, the so-called Gini coefficient, derived from World Bank data[2] and the human development index (HDI), obtained from the United Nations Development Programme.[3] Additionally, our multilevel model incorporated some variables related to the socioeconomic status of the students and the condition of immigration (in student level of nesting), using the index available in the ICCS 2009 (the national index of socioeconomic background [NISB index]).

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[2]The Gini coefficient is a measure of income inequality within a country. Data are available from https://data.worldbank.org/indicator/SI.POV.GINI

[3]The HDI is a measure of the progress of countries based on indicators from three areas: life expectancy (health), years of schooling (education), and gross national income per person (income). Data are available from http://hdr.undp.org/en/content/human-development-index-hdi

Fig. 5.1 Distribution of non-immigrant and immigrant students

5.3.3 Analytical Strategy

We used three main methods to address our objectives. First, we employed descriptive statistics (univariate and bivariate) to account for the distribution of immigrant students between countries and between schools. This enabled us to generate a general overview of immigrant students in the different school systems, showing the main similarities and differences in a comparative perspective.

Second, we used the Duncan index (Duncan and Duncan 1955) to account for the level of segregation of immigrant students[4] and to show the relationship between immigrant segregation and some variables related to the development of the countries, like the Gini coefficient or the HDI. The Duncan index (D) is defined as:

$$D = \frac{1}{2}\sum_{i=1}^{I}\left|\frac{ESi}{EST} - \frac{EIi}{EIT}\right| \tag{5.1}$$

where i represents a school within a country, ES is the number of students that present the analyzed attribute (in our case, an immigrant student) and EI are the number of students who do not possess the analyzed attribute in the school i. EST corresponds to the total number of students with the attribute in the geographical area of analysis, and EIT is the total number of students who do not possess the characteristics of the analysis in the same area. The Duncan index varies between 0 and 1. A value of 0 indicates that immigrant students are identically distributed across schools in the country. Conversely, an index value of 1 would imply that all immigrant students are concentrated in only one school.

In terms of interpretation, the Duncan index represents the percentage of immigrant students that should be transferred to other schools in order to achieve a non-segregated distribution in the entire educational system of the geographical area under analysis. Likewise, the levels of segregation of the index can be classified into four categories according to their values: (1) low segregation, between 0 and 0.3; (2) moderate segregation, between 0.3 and 0.45; (3) high segregation, between 0.45 and 0.6; and (4) hyper-segregation, for values over 0.6 (Glaeser and Vigdor 2001).

Finally, a three-level model is used to analyze the relationship between immigration segregation and attitudes toward diversity. The specification used in this model (see Chap. 2 in this volume) allowed us to analyze the outcome variance at each level, as well as to draw cluster-specific inferences (McNeish et al. 2017). The general specification of the model can be represented by three equations (Eqs. 5.2–5.4):

$$Y_{ijk} = \pi_{0jk} + \pi_{1jk}X_{ijk} + \varepsilon_{ijk} \tag{5.2}$$

$$\pi_{0jk} = \beta_{00k} + \beta_{01k}W_{.jk} + r_{0jk} \tag{5.3}$$

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[4]Although in recent years a dynamic discussion has developed on the advantages and disadvantages of using different indices to measure segregation (Alesina and Zhurayskaya 2011; Reardon and Firebaugh 2002), we decided to use the Duncan index for several reasons. First, the index has been widely used in the literature to account for educational phenomena (Allen and Vignoles 2007; Söderström and Uusitalo 2010; Valenzuela et al. 2014). In addition, the index is based on a dichotomous distinction of the population, being useful for the analysis of easily dichotomous groups (as is the case with race or immigration) over continuous indexes, more appropriate for the measurement of socioeconomic level, as rank-order measure (Reardon et al. 2006). Third, this index allows for both intertemporal comparability and the control of invariance in time (Glaeser and Vigdor 2001). Finally, the Duncan index is easy to interpret, making it understandable to a broad audience.

$$\beta_{00k} = \gamma_{000} + v_{00k} \tag{5.4}$$

where Y are the outcomes (in our case, the three attitudes toward immigrant diversity), X represents a set of control variables for students (in our case, being an immigrant and the socioeconomic status of the student) (Eq. 5.2), W represents a set of school characteristics (in our case, the index of immigrant segregation; Eq. 5.3), and Eq. (5.4) indicates that we included a third level with no control variables (Brincks et al. 2016; Sacerdote 2011).

5.4 Results

Our results indicate that most national school systems receive a relatively low portion of immigrant students. With the exception of five countries (Liechtenstein, Luxembourg, Hong Kong, Switzerland and New Zealand), the percentage of immigrant students (first- or second-generation) does not exceed 30%. Countries with the lowest proportion of immigrant students were mostly found in Asian, Latin American and Eastern European countries (see Fig. 5.1).

By contrast, the countries with the highest proportion of immigrant students (between 30 and 70%) are predominantly Western and Central European countries, where migration has become more relevant in recent decades (Algan et al. 2010; Card et al. 1998). In the countries with the highest proportion of immigrants, most of these can be classified as second-generation immigrants, that is, students born in the country of destination but of immigrant parents. Hypothetically, this may indicate that the current immigration wave is not as intense as the waves of the previous generation, which could be understood as an advantage for the generation of policies and programs of educational inclusion in the medium and long term.

In spite of its importance, the proportion of immigrant students per country does not enable a good understanding the distribution of these students between schools. In a significant number of countries, there was no high concentration of immigrants in schools; in all countries (except Luxembourg, Liechtenstein, Hong Kong and Chinese Taipei), in 50% of schools < 20% of students were immigrant students (Fig. 5.2). This may indicate that, in general terms, education systems do not systematically apply strategies to concentrate immigrant students in a particular group of schools.

In spite of this, it was evident that important variability exists in the composition of schools within school systems. This variability, although not massive, implies that there were schools that contained a significant percentage of immigrant students (and others with a small proportion of immigrant students). There may be numerous explanations for this, but they may correspond to the characteristics of immigration within each country. Thus, in countries with high mobility, such as Liechtenstein or Austria, it is possible that schools located in border regions have high numbers of immigrant students. In other cases, such as Hong Kong, parental employment could explain the concentrations of immigrant students in some
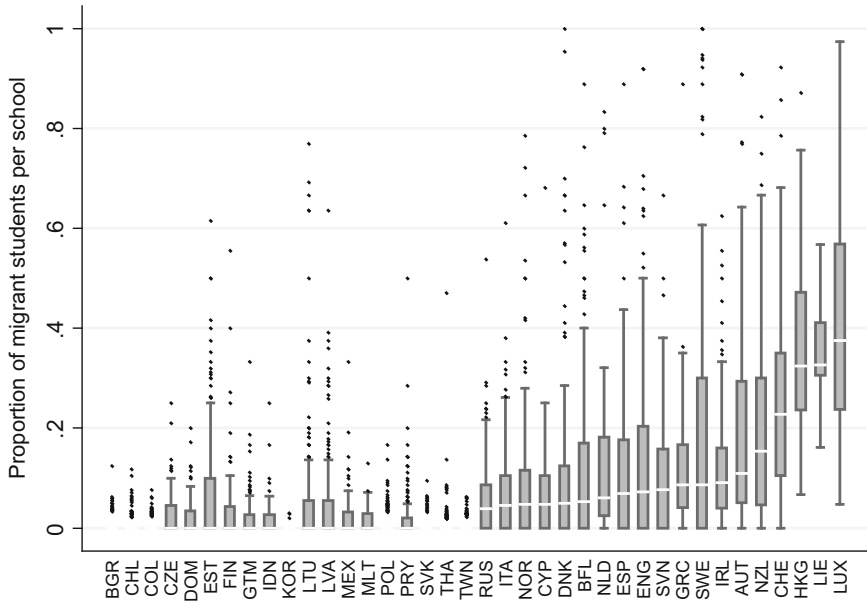
Fig. 5.2 Proportions of immigrant students within schools by country. The box graph is a quartile-based graphical representation of the data, showing the main characteristics of the frequency distribution and indicating atypical or extreme data. The box accounts for 50% of the central distribution of the variable (where the line inside the box marks the mean of the distribution) and the lines around the box account for the upper and lower 25% of the distribution. Points represent outliers (in our case, schools) more than two standard-deviations from the mean

schools. Be that as it may, it is significant that, despite not being a global trend, there are countries that have schools where immigrant students seem to be concentrated.

These findings are complemented by the descriptive results of the Duncan index of immigrant segregation per country. As mentioned earlier in this chapter, the Duncan index accounts for the level of segregation of a group of immigrant students in schools by considering the proportion of migrant students in the country.[5] The results show that, for the population as a whole, segregation is low in all countries, nowhere exceeding 0.015[6] (see Table 5.1).

Note, first of all, that segregation is generally low in all countries. However, there was also great variability between countries, and, for example, segregation

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[5]We incorporated the students' total sample weights after calculating the Duncan index for each student and school. In addition, we tested an alternative weighting method that incorporated the weights in the index calculation. Both forms of calculation showed a correlation of 0.9979.

[6]To compare these results, we constructed a second segregation index, based on Olsson and Valsecchi (2010). The correlation between the two indexes was strong but not identical (0.656). The description of the index and results by country can be found in the Appendix.

Table 5.1 Duncan segregation index per country

Country	Segregation index	Country	Segregation index
Switzerland	0.0025052	Estonia	0.0045341
Russian Federation	0.0025442	Latvia	0.0046809
Denmark	0.0026705	Chile	0.0047151
Greece	0.0027293	Indonesia	0.0048692
Slovenia	0.0028103	Poland	0.0049971
Ireland	0.0030691	England	0.0051094
Lithuania	0.0031847	Chinese Taipei	0.0051886
Sweden	0.0031863	Czech Republic	0.0052984
Italy	0.0032627	Paraguay	0.0054603
Mexico	0.0033161	Thailand	0.0056527
Austria	0.0034548	Guatemala	0.0057438
New Zealand	0.0035053	Bulgaria	0.0059761
Spain	0.0035162	Cyprus	0.0062464
Hong Kong, SAR	0.0038431	Netherlands	0.0064707
Dominican Republic	0.0041943	Korea, Republic of	0.0065633
Belgium (Flemish)	0.0042784	Slovakia	0.0069849
Colombia	0.0042893	Malta	0.0010419
Norway	0.0043517	Luxembourg	0.0122595
Finland	0.0044162	Liechtenstein	0.0144263

Note Across all countries, the average segregation index is 0.0043631

might be considered considerably more pronounced in Liechtenstein than in neighboring Switzerland, without recognizing differences between countries in terms of social, political or cultural development. Three countries (Malta, Luxembourg and Liechtenstein) showed high levels of segregation (> 0.01) , but Luxembourg and Liechtenstein are also the two countries that had the largest populations of immigrant students, suggesting there is a relationship between the percentage of immigrants and the level of segregation.

To explore possible patterns to understand these differences, we examined the relationship between socioeconomic segregation of indigenous students and two critical variables in each country: the level of inequality, measured by the Gini coefficient (Fig. 5.3), and the level of development, as measured by the HDI[7] (Fig. 5.4). We found that the relationship between both variables and the segregation of immigrant students was weak.

For the Gini coefficient, we found a slightly negative relationship, whereas the HDI indicated a slightly positive relationship. Although hypothetical, these results may indicate that the segregation of immigrant students does not develop as a result

[7]We also explored the relationship between levels of segregation and a nation's gross domestic product based on purchasing power parity (PPP). The results were very similar to those we found using the HDI index.

of a defined or clear policy aimed at concentrating (or, conversely, dispersing) immigrant students in different schools. In this sense, the level of segregation in school seems to be the product or consequence of the application of other types of policies (migratory, legislative, territorial) that do not directly affect the configuration or organization of immigrant students in each of the educational systems studied.

Finally, we used multilevel models to explore the relationship between school segregation and attitudes to immigrant diversity (see Table 5.2).

First, we found that a significant part of the attitudes toward immigrants may be explained by the characteristics of the students. The high percentage of variance explained at the student level[8] and the statistically significant effect of the control variables would indicate that, in general, these conditions, rather than the characteristics of the school, explain the level of tolerance toward equal rights for immigrants.

These results are in line with Bennett et al. (2009), who emphasized the limits that schools have for the promotion and development of civic attitudes in students, considering the (generally) high levels of structuring and hierarchization of the school system.

Particularly important in this context would be the immigration condition, which in 24 of the 38 countries is a statistically significant variable. In all these cases (with the exception of Mexico and Korea), the coefficient is always positive, which means that being an immigrant is related to higher levels of tolerance toward immigrant groups.

The socioeconomic index was significant in 15 countries. In all of them the estimated relationship was positive, which means that students with higher socioeconomic levels had higher scores on the diversity tolerance index. This implies that the overlap between immigration status and vulnerability was neither universal nor empirically clear.

In addition, the school-level characteristic that we included as our focus (the level of segregation of immigrant students per school) showed that, in general terms, this variable was not a highly predictive factor at the comparative level. In fact, the segregation of migrant students between schools was only a significant factor in explaining attitudes toward immigrants in nine countries, and in seven of these it had a negative effect. This implies that in these countries segregation (after controlling for the condition of immigration and the socioeconomic level of the students) explained levels of tolerance toward the immigrant population negatively. The exceptions to this were Chile and Guatemala, where the association between segregation and attitudes toward immigrants was positive.

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[8]The effect of individual school and family variables on attitudes toward diversity is explored more deeply in Chap. 4.
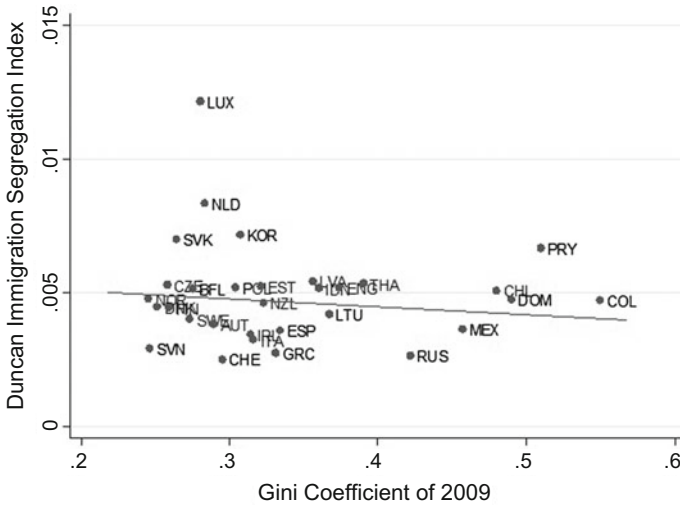
Fig. 5.3 Duncan immigration segregation index, as related to the Gini coefficient of economic inequality. The Duncan segregation index indicates the level of segregation between schools for immigrant students in each country, using the ICCS 2009 data. The Gini coefficient is a measure of income inequality within a country, based on data provided by the World Bank (see Sect. 5.3.2 for more details)
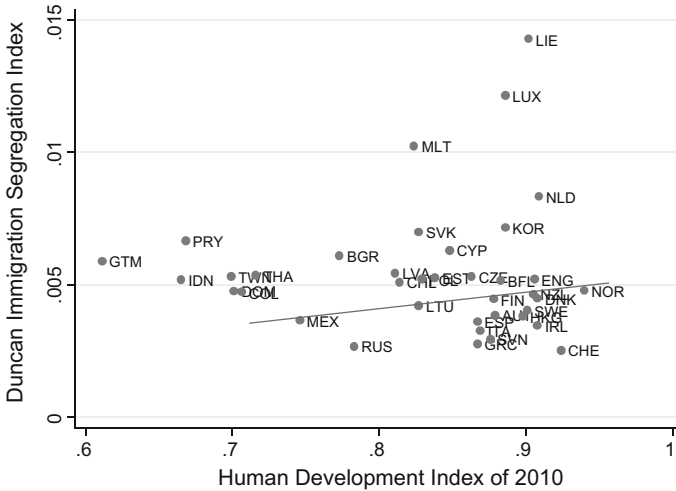
Fig. 5.4 Duncan immigration segregation index, as related to the human development index (2010). The Duncan segregation index indicates the level of segregation between schools for immigrant students in each country, using ICCS 2009 data. The human development index is a measure developed by the United Nations Development Programme to assess the progress of a country, based on indicators from three areas: average life expectancy (health), years of schooling (education) and gross national income per person (income) (see Sect. 5.3.2 for more details)

Table 5.2 Multilevel model exploring the effect of immigrant segregation on attitudes to immigration

Country	Student level ICC (%)	Immigrant condition			Socioeconomic index			School level ICC (%)	Duncan index		
		E	SE	P	E	SE	P		E	SE	P
Austria	92.3	7.45	0.76	0.000	1.18	0.31	0.000	7.7	−0.01	0.00	0.061
Bulgaria	94.7	4.11	2.93	0.161	0.26	0.70	0.708	5.3	−0.01	0.00	0.038
Chile	94.6	3.25	1.80	0.071	0.32	0.44	0.470	5.4	0.02	0.01	0.028
Chinese Taipei	97.8	1.41	1.86	0.449	0.83	0.29	0.004	2.2	−0.00	0.00	0.184
Colombia	96.7	0.44	1.32	0.736	0.89	0.35	0.012	3.3	−0.00	0.00	0.792
Cyprus	98.6	3.35	0.86	0.000	0.94	0.33	0.005	1.4	0.03	0.02	0.105
Czech Republic	96.3	3.62	1.32	0.006	0.14	0.22	0.507	3.8	−0.01	0.00	0.039
Denmark	91.3	5.52	0.53	0.000	1.30	0.19	0.000	8.8	0.00	0.00	0.295
Dominican Republic	97.4	−0.16	1.29	0.898	0.15	0.32	0.155	2.6	0.00	0.00	0.412
Estonia	94.7	0.31	0.77	0.686	0.57	0.32	0.082	5.3	−0.04	0.00	0.000
Finland	96.4	6.53	1.41	0.000	2.23	0.58	0.000	3.6	0.00	0.01	0.998
Greece	95.6	3.19	1.01	0.002	0.87	0.32	0.007	4.4	−0.02	0.00	0.006
Guatemala	97.8	0.1	1.18	0.870	0.46	0.34	0.179	2.2	0.02	0.00	0.004
Hong Kong, SAR	96.2	1.62	0.31	0.000	0.54	0.23	0.021	3.8	−0.00	0.01	0.826
Indonesia	95.6	−1.56	0.91	0.086	0.32	0.18	0.071	4.5	−0.01	0.00	0.009
Ireland	93.8	5.19	0.57	0.000	1.10	0.22	0.000	6.2	−0.00	0.00	0.307
Italy	90.7	6.00	0.62	0.000	0.34	0.40	0.384	9.3	−0.02	0.01	0.037
Korea, Republic of	98.4	−14.76	6.00	0.014	0.94	0.54	0.085	1.6	0.00	0.01	0.823
Latvia	94.1	0.45	1.01	0.654	−0.24	0.37	0.516	5.9	−0.01	0.01	0.156
Liechtenstein	99.0	3.71	1.12	0.001	−0.13	0.68	0.843	1.0	0.36	0.28	0.194
Lithuania	94.6	−0.76	0.79	0.336	1.03	0.24	0.000	5.4	−0.02	0.00	0.008
Luxembourg	96.2	5.95	0.46	0.000	−0.41	0.27	0.122	3.8	0.02	0.03	0.438

(continued)

Table 5.2 (continued)

Country	Student level ICC (%)	Immigrant condition			Socioeconomic index			School level ICC (%)	Duncan index		
		E	SE	P	E	SE	P		E	SE	P
Malta	93.8	1.06	1.51	0.484	0.61	0.45	0.180	6.2	0.06	0.03	0.088
Mexico	94.9	−3.18	1.29	0.014	0.39	0.30	0.190	5.1	−0.01	0.10	0.067
Netherlands	91.9	6.46	0.76	0.000	0.71	0.30	0.019	8.2	0.01	0.03	0.641
New Zealand	92.0	4.88	0.42	0.000	0.94	0.26	0.000	8.0	0.01	0.00	0.136
Norway	95.2	4.94	0.74	0.000	0.79	0.41	0.054	4.8	−0.00	0.00	0.518
Paraguay	94.8	0.64	1.00	0.523	0.18	0.31	0.555	5.2	−0.01	0.01	0.300
Poland	93.9	−0.17	1.84	0.926	0.45	0.25	0.079	6.1	0.01	0.00	0.218
Russian Federation	94.8	2.08	0.70	0.003	0.34	0.22	0.126	5.2	−0.00	0.00	0.499
Slovakia	94.5	1.87	1.50	0.213	−0.69	0.49	0.157	5.5	−0.01	0.01	0.319
Slovenia	94.1	2.82	0.88	0.002	0.41	0.34	0.235	5.9	−0.00	0.00	0.875
Spain	94.5	5.20	0.86	0.000	1.16	0.55	0.034	5.5	0.00	0.00	0.318
Sweden	86.4	8.47	0.83	0.000	0.86	0.32	0.008	13.6	−0.00	0.00	0.268
Switzerland	95.0	5.58	0.61	0.000	−0.17	0.28	0.550	5.0	0.00	0.00	0.680
Thailand	96.8	1.47	0.45	0.001	0.28	0.33	0.399	3.2	−0.00	0.00	0.476
England	89.3	7.26	0.81	0.000	0.14	0.37	0.690	10.7	0.02	0.01	0.071
Belgium (Flemish)	91.9	4.53	0.87	0.000	−0.71	0.25	0.006	8.1	0.00	0.00	0.957

ICC intra-class correlation; *E* estimated coefficients; *SE* standard deviation; *P* p-value

5.5   Discussion and Conclusions

In this chapter, we examined levels of segregation of migrant students, and assessed how these levels relate to different country characteristics and to student attitudes toward immigration. We found that the immigration condition involves only a small proportion of students in most countries and, in general, there is little segregation of immigrant students across schools, although there is a wide heterogeneity across different countries. In addition, we found that the effect of school segregation on attitudes toward immigration is limited for some countries and moderate in its magnitude.

From these results, it is possible to make two conclusions. First, it seems that countries do not implement systematic policies to concentrate and/or segregate immigrant students in the same school. This tentatively indicates that school can be understood as a meeting place between different cultures, and implies that, unlike other variables such as socioeconomic level or academic ability, the immigration condition is not a variable that is frequently used to select students; conversely geographic, cultural or economic factors seem to generate certain distribution patterns for these students. This could, at least hypothetically, explain why variables classically used to compare levels of educational segregation across countries (such as level of development or inequity of the country) have not been particularly relevant in this study.

Secondly, it is interesting to discuss the relationship between attitudes toward immigration and educational segregation of immigrant students. Although preliminary, it is clear that individual variables are more important than school characteristics.

Complementary to the results of Chap. 4, in this chapter, we showed that school composition (measured in this case as the level of school segregation) was not a crucial factor in explaining attitudes toward diversity. This indicates that schools may have a limited role in the transformation of certain attitudes, thus reinforcing the importance of designing policies, programs and actions that enhance the knowledge and development of civic skills, enabling schools to become promoters of attitudes conducive to diversity.

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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

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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, benefiting 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.

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

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

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 Tofighi 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:

$$
\begin{aligned}
Y_{ijk} = {} & \pi_{0jk} + \pi_{1jk}\left(x_{ijk} - \bar{x}_{.jk}\right) + \pi_{2jk}\left(m_{ijk} - \bar{m}_{.jk}\right) \\
& + \pi_{3jk}\left(w_{ijk} - \bar{w}_{.jk}\right) + \pi_{4jk}\left(Z_{ijk} - \bar{Z}_{..k}\right) + \varepsilon_{ijk}
\end{aligned}
\tag{6.1}
$$

$$
\begin{aligned}
\pi_{0jk} = {} & \beta_{00k} + \beta_{01k}\left(\bar{x}_{.jk} - \bar{x}_{..k}\right) + \beta_{02k}\left(m_{ijk} - \bar{m}_{.jk}\right) \\
& + \beta_{03k}\left(\bar{w}_{.jk} - \bar{w}_{..k}\right) + \beta_{04k}\left(\bar{w}_{.jk} - \bar{w}_{..k}\right) \times \left(\bar{x}_{.jk} - \bar{x}_{..k}\right) \\
& + r_{0jk}
\end{aligned}
\tag{6.2}
$$

$$
\beta_{00k} = \gamma_{000} + \nu_{00k}
\tag{6.3}
$$

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, $0 =$ boy, $1 =$ girl) and student immigrant background (IMMIG, $0 =$ non-immigrant, $1 =$ 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.[1] 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,

Table 6.2 Fit statistics

Criterion for model selection	Model			
	Null	Control	Main	Moderation
−2 LL	2353257.59 (0.00)	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

[1]Reported 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.

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

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

(β_{02k} = 0.23, SE = 0.02, $p < 0.01$), all ethnic groups (β_{02k} = 0.21, SE = 0.12, $p < 0.01$), and immigrants (β_{02k} = 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 (β_{04k} = −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
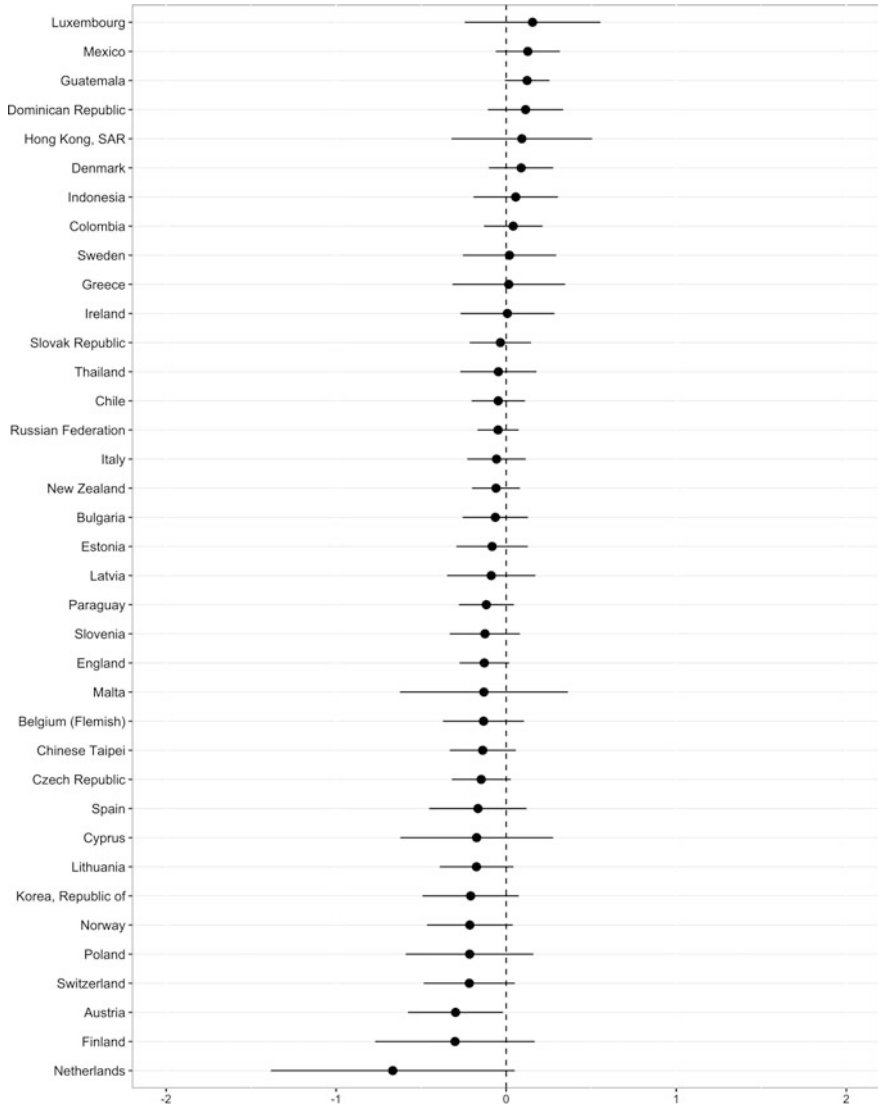
Fig. 6.1 Interaction effect between open classroom discussion scores and the average socio-economic level of school intake on support for equal rights for women. Unstandardized coefficients for the interaction term of open classroom discussion school means and SES school means. Mean estimates are plotted 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

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

results of the single-country models indicated that a statistically significant inter-action 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.

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Chapter 7
The Political Socialization of Attitudes Toward Equal Rights from a Comparative Perspective

Daniel Miranda, Juan Carlos Castillo and Patricio Cumsille

Abstract Lack of tolerance toward traditionally disadvantaged groups, such as immigrants, ethnic minorities and women, represents a growing challenge to contemporary democracies. Assuming that attitudes toward such social groups are at least partly learned during the political socialization of school-age children, this chapter explores individual differences in equal rights attitudes using data from the last International Civic and Citizenship Education Study (ICCS) 2009 on socioeconomic and demographic characteristics of eighth grade students from 38 countries. Using structural equations and multilevel models, the analysis estimates regression models using a set of measures, with family status being the main independent variable. The results show that there are large differences across countries regarding the level of inclusive attitudes, and that parental education and the number of books at home are relevant predictors of more inclusive attitudes of children in most of the countries analyzed; however, patterns differ by gender and immigrant groups. The findings are discussed, taking into account current and future political issues associated with migration and demands for equal rights.

Keywords Attitudes toward diversity · International Civic and Citizenship Education Study (ICCS) · International large-scale assessments Multilevel structural equation models

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7.1   Introduction

Equal rights for all groups in society is a founding principle of democratic systems. Nevertheless, it is clear that achieving social equality is an ongoing endeavor throughout the world, especially in challenging times when anti-immigrant attitudes seem to be increasing in several democracies, ethnic conflicts occur, and inequality persists between men and women in labor markets and political representation. In this context, it becomes highly relevant to analyze the extent to which the equal rights of disadvantaged groups are supported by individuals from different societies. Furthermore, as such attitudes are learned during the political socialization process, putting the focus on school-age children age may allow societies to understand how predispositions are created and to design timely interventions.

From research on adult populations, it is widely known that several political outcomes, such as participation and knowledge, are associated with higher socioeconomic status (Dahl 2006; Dubrow 2014; Gallego 2007; Lancee and Van de Werfhorst 2012; Marien et al. 2010a, b; Schlozman et al. 2012); this is termed the resources model of political participation. Nevertheless, the role of resources is less clear when it comes to explaining a series of political attitudes in areas such as attitudes toward equal rights in the adult population, let alone in children of school age. In this regard, this chapter is guided by the following questions: *Do children differ in their support for equal rights according to their socioeconomic background and group characteristics, and can these differences be measured?* We here target attitudes toward equal rights for three social groups: ethnic minorities, immigrants and women. To determine the student's socioeconomic background, we considered parental occupation, the educational level of the parents, and the number of books in the home; for group characteristics we also incorporated student gender and immigrant background.

7.2   Theoretical Background

7.2.1   Political Outcomes, Socioeconomic Status and Political Socialization

When attempting to explain differences in political behavior in general, the resource model is the most important theoretical framework used in the specialized literature (Brady et al. 1995; Schlozman et al. 2012; Verba et al. 1995). The resource model indicates that involvement in political activities is strongly associated with an individual's social position, that is their educational level, income and/or occupational status, as well as by resources such as time, social skills and money. Although research in this area has generally focused on traditional political participation, such as voting, recent evidence indicates that resources are also related to emerging political action repertoires, such as protests and civil movements (Stolle

and Hooghe 2011). In both the USA and Europe, there is accumulating evidence supporting the social position bias in participation (Gallego 2007). Among several possible variables related to resources, educational level has been the one that is most consistently linked to participation rates (Leighley 1995; Schlozman et al. 2012; Verba et al. 1995). Adopting a meta-analytical strategy using a set of 32 studies, Smets and van Ham (2013) showed that the resource model was successful in predicting voter turnout: a change in one standard deviation in educational level was associated with a change of 0.72 standard deviations in voter turnout.

From an intergenerational perspective, evidence supports the position that a positive association between the resources of parents and political outcomes will be passed on to subsequent generations (Brady et al. 2015; Burns et al. 1997; Schlozman et al. 2012; Verba et al. 2003). Castillo et al. (2014) found that school-age children of families from lower socioeconomic status had lower expectations of voting in the future. Further, consistency between parent and child attitudes and/or behavior has been observed in several empirical studies (Gidengil et al. 2016; Jennings and Niemi 1968, 2015; Jennings et al. 2009; Niemi and Hepburn 1995; Quintelier 2015). Nevertheless, research on political socialization still faces several challenges, among which we identify at least two. One of these deals with achieving a broader conceptualization of citizenship, beyond participation (Amnå et al. 2009; Ekman and Amnå 2012; Hoskins 2006), such as the consideration of the development of democratic principles, as well as civic knowledge. A second challenge refers to the phenomenon of inequality reproduction. On this issue, Brady et al. (2015, p. 5) pointed out: "political socialization research has focused on the transmission of political attitudes and culture across generations, but it has paid scant attention to how the family transfer of economic resources, human capital, and social capital reproduce and perpetuate unequal patterns of political involvement and political authority." Therefore, further studies on the political socialization of democratic attitudes, and its interaction with socioeconomic distribution, is a research topic that can certainly help to promote better understanding of these challenges. Within this area, a more precise understanding of how different measures of socioeconomic position and family resources explain different political outcomes in children requires additional empirical and theoretical development.

Despite the cumulative evidence of the association between socioeconomic status and political behavior, the conceptualization and measurement of socioeconomic indicators is a topic that deserves more attention (Bukodi and Goldthorpe 2013; Elsässer and Schäfer 2016; Jæger 2007). There are several socioeconomic indexes that have been related to sociopolitical outcomes, such as income, occupational prestige, educational level and social class. However, there is still controversy about the best way to use the socioeconomic measures. Some researchers have proposed composite measures of socioeconomic indexes, classified under the umbrella of socioeconomic factors that can be used as interchangeable measures of life chances, social position or resources (Lazarsfeld 1939), or combined in a general socioeconomic index; beyond the variability between indicators and/or advantages of using indicators separately (NCES 2012). Others have proposed distinguishing, conceptually and empirically, the differences among types of socioeconomic indexes as different types of

capital (Bourdieu 2003) or different types of resources (Brady et al. 1995) that can explain differences in the outcomes. Similarly, Budoki and Goldthorpe (2013) concluded that the decision to use only one or several measures of socioeconomic status may cause either overestimation or underestimation of the effect of social inequalities.

To investigate the effect of socioeconomic background on political outcomes, we used three measures of student socioeconomic background derived from the IEA's International Civic and Citizenship Education Study (ICCS) 2009: parental educational level, parental occupational status and the number of books at home. This last variable is considered to be a toolkit that provides a set of cognitive skills to enhance academic performance at school and/or increase intellectual capacities. The number of books at home as an indicator of cultural resources has been connected with higher educational attainment (Evans et al. 2010, 2015; Park 2008) and with some post-materialistic goals, like environmental attitudes (Duarte et al. 2017; Pauw and Petegem 2010). In some research, the number of books at home has been used as a proxy for parental status (Persson 2015), while others have used this as an independent indicator of stratification (Neundorf et al. 2016).

7.2.2   Tolerance Toward Disadvantaged Groups and Children's Socioeconomic Background

Socioeconomic status has been associated with sociopolitical outcomes beyond political participation, such as political knowledge, political interest and political attitudes. People with a higher socioeconomic position and overall education show higher levels of trust (Hooghe et al. 2015), higher levels of political interest (Hooghe and Dassonneville 2011) and higher levels of tolerance (Bobo and Licari 1989). As McCall and Manza (2011) noted, evidence about the links between socioeconomic variables and political preferences highlights the relevance of the socioeconomic context and status in the formation of public opinion. In this sense, it can be expected that these specific attitudes vary across the levels of resources.

One of the main resources for studying attitudes toward equal rights of disadvantaged groups is ICCS, which considers tolerance as the degree to which young people support equal rights for different groups in society (Schulz et al. 2008; Van Zalk and Kerr 2014). Some have used this definition with a focus on specific groups such as immigrants (Barber et al. 2013; Bridges and Mateut 2014; Isac et al. 2012; Janmaat 2014; Dotti Sani and Quaranta 2017; Strabac et al. 2014; Van Zalk and Kerr 2014). Two aspects require further attention. First, most studies have focused on only one social group, primarily migrants, and less frequently on women or ethnic minorities. Therefore, previous research has not established whether attitudes toward equal rights are an overall underlying disposition or whether such attitudes vary according to target groups. Secondly, these studies typically use socioeconomic measures as control variables, with different operationalization, blurring

the conceptualization of socioeconomic measures and their potential relationships with egalitarian attitudes.

Two theoretical models have been used to relate attitudes toward equal rights with socioeconomic resources: the competition model and the enlightenment model. The competition model, also called "labor market competition model" or "threat to status model" (Caro and Schulz 2012; Côté and Erickson 2009; Jaime-Castillo et al. 2016), assumes that the competition for the same social space and resources varies according to an individual's place in the hierarchy of social status. Given that people with lower resources coexist in the social space as other excluded groups, such as immigrants, they compete for the same jobs and educational opportunities, and they therefore develop and manifest negative dispositions toward those groups (Caro and Schulz 2012; Kunovich 2004). In contrast, wealthy people do not compete with excluded groups and they may even experience diversity in a positive way, generating more positive attitudes (Caro and Schulz 2012). The competition approach is more applicable to attitudes toward migrants and ethnic minorities, while competition aspects may differ for gender equality.

The enlightenment model postulates that more educated people are "morally enlightened" by education (Jackman and Muha 1984) and, as a consequence of that, internalize democratic norms and principles (Lipset 1960), including higher support for equality. In line with this view, some studies have indicated that education may be the biggest factor in helping to explain the development of political tolerance (Bobo and Licari 1989; Golebiowska 1995).

As predicted by the enlightenment model, research focused on intergenerational transmission of values has shown that the education and occupation of parents have relevant effects on the democratic attitudes of their offspring (Evans et al. 2015; Quintelier and Hooghe 2013; Schlozman et al. 2012; Verba et al. 2003). The study of tolerance and early years socialization have received increasing attention, reflecting the growing debate about the development of basic democratic principles (Rapp and Freitag 2015; Toots and Idnurm 2012). However, a common element in these studies is that socioeconomic measures were used as a control variable, revealing that the main focus of previous research has not been on socioeconomic position and how that may be related to equal rights attitudes. Most studies have focused on the egalitarian attitudes toward immigrants (Barber et al. 2013; Isac et al. 2012; Janmaat 2014), reflecting current and growing concerns about the immigration crisis. With respect to gender, it is worth mentioning the study of Dotti Sani and Quaranta (2017), who evaluated support for gender equality using 36 countries who participated in ICCS 2009. They found that the educational level of a child's mother had a relevant role in the socialization of dispositions to gender equality, particularly for daughters.

In addition to socioeconomic evidence, another well-established factor is that men and women differ in their political attitudes and participation. Several studies indicate that women appear more oriented toward democratic principles than men: specifically, women show higher levels of agreement with egalitarian principals (Bolzendahl and Coffé 2009; Caro and Schulz 2012), more positive attitudes toward gender equality (Dotti Sani and Quaranta 2017) and stronger pro-environmental

attitudes (Duarte et al. 2017; Pauw and Petegem 2010). Research with adolescents and young adults has shown that gender differences in political participation and attitudes are more nuanced. For example, a study of 10th and 11th grade Chilean high school students showed that girls had higher levels of pro-social attitudes and involvement in political and pro-social action, and higher levels of political efficacy than boys, whereas boys showed higher levels of political involvement than girls (Martinez and Cumsille 2010). Both groups anticipated the same level of political involvement as adults. Similarly, Sherrod and Baskir (2010) reported differences in political interest in high school students in the USA, with girls supporting more pro-social policies and boys supporting more conservative policies. Harris and Bulbeck (2010) reported that women attending Australia universities were more involved in "new forms of politics" (such as activist organizations), while men attending Australian universities were more likely involved in traditional political activities (such as joining a political party).

From social psychology, it has been established that perspectives on attitudinal development (such as discrimination and prejudice) differ vastly between social majority and minority groups (Zick et al. 2001); for instance, immigrants and females show higher demands for equality than non-immigrants and males (Janmaat 2014; Dotti Sani and Quaranta 2017; Schulz et al. 2008). This implies that those who are in a disadvantaged position demand higher equality.

Considering the evidence and theories about the relations between socio-economic background and egalitarian attitudes, our analysis of the ICCS data tested the following hypotheses:

- H1 (resources hypothesis): children coming from more educated families, with higher socioeconomic status and more books at home, will express larger support toward equal rights for immigrants, ethnic groups and women than children from less educated families.
- H2 (demand hypothesis): controlling for socioeconomic status, women and immigrants will show higher levels of support for equality for all groups than men and non-migrants.
- H3 (interaction hypothesis): combining the resources and demand hypotheses, we predict that greater demands for equality by disadvantaged groups (women and migrants) will be less affected by socioeconomic background than for non-disadvantaged groups (men and non-migrants). Because previous evidence is not conclusive, we propose this hypothesis merits exploratory testing.

7.3   Methods

7.3.1   Data

We used data from the International Civic and Citizenship Education Study (ICCS) 2009 (for the specific description of this dataset, see Chap. 2). Our final sample varied slightly from the original dataset, as the set of variables involved in these analyses have a specific missing data pattern (less than 8.6%). The sample we used for our analyses included 126,707 eighth-grade students, from 5366 schools nested in 38 countries.

7.3.2   Variables

Dependent Variables

The dependent variables are attitudes toward equal rights. The ICCS questionnaire includes a set of items that measure students' opinions about equal rights for immigrants, ethnic groups and women. The scale of gender equality attitudes considers three items that refer to equal rights for women (i.e. men and women should have equal opportunities to take part in government). The same occurs for the scale of immigrant equality attitudes (i.e. immigrants should have all the same rights that everyone else in the country has) and for the scale of ethnic equality (i.e. all ethnic/racial groups should have an equal chance to get a good education [in the country of test]); each scale is based on four items. Using confirmatory factor analyses to develop the corresponding three factor structure, which includes testing for measurement invariance across countries, we estimated a measurement model and rescaled the latent measures to a mean 50 and a standard deviation of 10 (refer to Chap. 3, Table 3.1, for the set of indicator items we used in our measurement model).

Independent Variables

As part of the ICCS student questionnaire, students provide information on three variables describing student socioeconomic background: parental education, parental occupational status, and number of books at home. The parental educational level is classified according to the international classification of educational achievement (Schulz et al. 2011) based on the highest level of education of either the father or the mother (see Table 7.1). The parental occupational status reflects the highest occupational level of either parent based on occupational ISCO 88 (International Standard Classification of Occupations) codes. Student responses provide data on the number of books at home and student gender. Finally, the ICCS database provides data on the immigration background, recoded at two levels (immigrant background and non-immigrant background).

Table 7.1 Socioeconomic and group variables

ICCS code	Variable	Levels
HISCED	*Highest parental educational level*	
	What is the highest level of education completed by your father <or male guardian>? What is the highest level of education completed by your mother <or female guardian>?	5. Completed university/college or postgraduate 4. Completed technical 3. Completed secondary 2. 8th grade 1. 6th grade 0. Did not finish 6th grade
HISEI	*Parents' highest occupational status*	
	Highest occupational status of parents based on ISCO-88 codes	90 Highest occupational status to 16 Lowest occupational status
HOMELIT	*Number of books in home*	
	About how many books are there in your home?	5. More than 500 books 4. 201–500 3. 101–200 2. 26–100 1. 11–25 0. 0–10
SGENDER	*Student gender*	
	Are you a girl or boy?	1. Girls 0. Boys
IMMIG	*Student immigrant status*	
	– Non-native students (1) – First-generation immigrant (1) – Native students (0)	1. Students with immigrant background 0. Non-immigrants

7.3.3 Analytical Strategy

Given the nested design of the ICCS study (students in schools, schools in countries; see Chap. 3), the estimations considered three-level models in order to estimate properly the variances at each level, but predictors were considered only at the individual level (level 1).

We used multilevel structural equation modeling (MLSEM) to test our hypotheses. As explained in Chap. 2, the models specified the three dependent variables simultaneously. Socioeconomic measures were then specified country-centered, following the recommendation of Enders and Tofighi (2007) for models focused at the individual level. Finally, we used a maximum likelihood estimation with robust standard error, allowing modeling with non-normality and non-independence of the observations (Muthén and Muthén 2015).

The full model representing our three hypotheses can be expressed by the following equation, which is specified for each outcome under study:

$$Y_{ijk} = \pi_{0jk} + \pi_{1jk}\left(x_{ijk} - \bar{x}_{..k}\right) + \pi_{2jk}\left(m_{ijk}\right) + \pi_{3jk}\left(\left(x_{ijk} - \bar{x}_{..k}\right) \times \left(m_{ijk}\right)\right) + \varepsilon_{ijk} \quad (7.1)$$

$$\pi_{0jk} = \beta_{00k} + r_{0jk} \quad\quad\quad (7.2a)$$

$$\pi_{1jk} = \beta_{10k} \quad\quad\quad (7.2b)$$

$$\pi_{2jk} = \beta_{20k} \qu\quad\quad (7.2c)$$

$$\pi_{3jk} = \beta_{30k} \ququad\quad (7.2d)$$

$$\beta_{00k} = \gamma_{000} + v_{00k} \qu\quad\quad (7.3)$$

Here Y stands for the outcome variables, $x_{ijk} - \bar{x}_{..k}$ represent the parental socioeconomic measures (country centered) for testing the resources model hypothesis, the m_{ijk} terms represent the group variables for testing the demand hypothesis (gender and student immigrant background) and $\left(x_{ijk} - \bar{x}_{..k}\right) \times \left(m_{ijk}\right)$ denotes the interaction hypothesis.

7.4   Results

The analyses revealed correlational patterns among socioeconomic measures and egalitarian attitudes. We also assessed the results of the multilevel modeling while focusing on the resources model, the demands and the interaction hypotheses.

7.4.1   Correlational Patterns

We began by estimating the bivariate correlation between each socioeconomic measure and each egalitarian attitude for each country (see Table 7.2).

We found that, although low, the correlation averages indicated a positive correlation among all socioeconomic measures with the three egalitarian attitudes. The highest pairs of correlation were between books at home and gender equality attitude (average = 0.119), parental occupational status and gender equality attitude (average = 0.110), and books at home and ethnic equality attitude, while the lowest correlation was between parental education and immigrant equality attitude (average = 0.058). We also found that, generally, pairs of correlation by country exhibited positive and statistically significant patterns. All observed bivariate correlations were relatively small, nevertheless, some country variation was observed. For instance, the average correlation between occupational status and gender equality attitudes was 0.110 (Table 7.2). Hong Kong (SAR) and Liechtenstein had the lowest correlations (0.032 and 0.047, respectively) and New Zealand the highest

Table 7.2 Bivariate relation among socioeconomic measures and egalitarian attitudes, by country

Country	Gender equality			Immigrant equality			Ethnic equality		
	Occupational status	Parents' education	Books at home	Occupational status	Parents' education	Books at home	Occupational status	Parents' education	Books at home
Austria	0.165	0.167	0.147	0.097	0.076	0.060	0.141	0.088	0.141
Bulgaria	0.105	0.070	0.158	0.076	0.067	0.118	0.023	–0.003	0.035
Chile	0.126	0.131	0.113	0.092	0.104	0.086	0.132	0.142	0.116
Chinese Taipei	0.108	0.102	0.145	0.108	0.100	0.141	0.101	0.092	0.146
Colombia	0.110	0.099	0.135	0.059	0.048	0.090	0.099	0.084	0.122
Cyprus	0.112	0.126	0.096	0.070	0.073	0.056	0.093	0.121	0.085
Czech Republic	0.099	0.034	0.149	0.038	0.015	0.092	0.046	0.017	0.114
Denmark	0.135	0.092	0.186	0.117	0.062	0.159	0.126	0.069	0.168
Dominican Republic	0.055	0.074	0.030	0.032	0.039	0.011	0.031	0.042	0.011
Estonia	0.114	0.064	0.080	0.027	0.045	–0.012	0.121	0.059	0.066
Finland	0.098	0.082	0.142	0.082	0.078	0.142	0.091	0.076	0.168
Greece	0.116	0.086	0.130	0.077	0.080	0.128	0.087	0.086	0.138
Guatemala	0.114	0.094	0.094	0.062	0.049	0.061	0.103	0.079	0.089
Hong Kong, SAR	0.032	0.032	0.062	0.048	0.064	0.100	0.030	0.050	0.096
Indonesia	0.115	0.118	0.036	0.088	0.093	0.037	0.125	0.131	0.047
Ireland	0.116	0.134	0.179	0.096	0.122	0.162	0.127	0.150	0.183
Italy	0.118	0.102	0.160	0.073	0.083	0.078	0.100	0.101	0.125
Korea, Republic of	0.083	0.073	0.130	0.078	0.075	0.122	0.072	0.080	0.155
Latvia	0.090	0.119	0.097	–0.017	–0.017	–0.010	0.034	0.035	0.047
Liechtenstein	0.047	0.061	0.118	0.034	0.031	–0.010	0.060	0.057	0.086
Lithuania	0.142	0.151	0.141	0.097	0.094	0.123	0.116	0.122	0.134
Luxembourg	0.067	0.054	0.094	–0.075	–0.143	–0.106	–0.053	–0.101	–0.058
Malta	0.114	0.072	0.132	0.000	0.027	0.080	0.071	0.063	0.111
Mexico	0.114	0.126	0.090	0.079	0.084	0.076	0.109	0.118	0.097
Netherlands	0.140	0.111	0.083	0.072	0.077	0.091	0.127	0.092	0.113
New Zealand	0.169	0.105	0.152	0.121	0.112	0.113	0.144	0.117	0.138
Norway	0.131	0.127	0.159	0.081	0.086	0.093	0.120	0.118	0.137
Paraguay	0.123	0.118	0.141	0.090	0.083	0.116	0.101	0.096	0.125
Poland	0.089	0.057	0.102	0.072	0.055	0.076	0.108	0.097	0.070
Russian Federation	0.114	0.076	0.088	0.060	0.021	0.036	0.071	0.047	0.138
Slovak Republic	0.129	0.065	0.167	0.074	0.047	0.117	0.091	0.036	0.091
Slovenia	0.089	0.052	0.111	0.046	0.016	0.048	0.086	0.044	0.134
Spain	0.134	0.138	0.144	0.082	0.096	0.076	0.115	0.132	0.110
Sweden	0.117	0.091	0.108	0.084	0.057	0.067	0.116	0.077	0.085
Switzerland	0.081	0.079	0.095	0.002	0.024	0.002	0.076	0.077	0.085
Thailand	0.154	0.162	0.103	0.068	0.080	0.073	0.156	0.162	0.103
England	0.143	0.098	0.194	0.128	0.108	0.177	0.145	0.109	0.194
Belgium (Flemish)	0.079	0.029	0.037	0.013	–0.022	0.030	0.047	0.001	0.053
Average correlation	0.110	0.094	0.119	0.064	0.058	0.076	0.092	0.078	0.105

Note Significant correlations at $p < 0.05$ are shown in bold. Shaded cells indicate negative correlations; note that in all other cases there was a positive correlation

correlation (0.169). This exploration of the bivariate relations indicated that socioeconomic measures, in general, were positively related to dispositions supporting equality toward disadvantaged groups across countries.

As is well known, socioeconomic measures are not independent. With this in mind, we estimated the correlations among these measures in order to evaluate their level of association in each country. The average correlation between occupation status and parental education was 0.50 (minimum = 0.364, maximum = 0.657). The average correlation between occupational status and books at home was 0.321 (minimum = 0.152, maximum = 0.465) and the average correlation between

parental education and books at home was 0.335 (minimum = 0.203, maximum = 0.489). These results confirmed associations exist among these variables. Nevertheless, the strength of correlations differed among the variables, showing medium to high correlations. Books at home was most weakly related with the other two socioeconomic measures, suggesting that this indicator measures a different dimension. We also estimated the variance inflation factor (VIF) of each measure in order to test for potential multicollinearity problems (Gujarati 2003). We found that none of the measures exceeded the conventional limits (VIF of status = 1.468, VIF of education = 1.515, VIF of books = 1.233). Based on these estimations, we included all the measures separately in order to explore different association patterns.

7.4.2 Testing Hypotheses 1 and 2

Our multilevel-SEM estimation found that model 1 (see Table 7.3) partially supported the resources model hypothesis, which suggests there should be a positive association between socioeconomic measures and egalitarian attitudes. Occupational status and the number of books at home were positively related to the three attitudinal outcomes. Nevertheless, in the case of education, the pattern slightly differed. This variable was only related to gender equality attitudes after controlling for parental occupational status and books at home. Books at home was positive associated with the three dependent variables in model 1. Based on these general patterns, the anticipated average scores for a student from a family in the lowest 5% of the distribution of socioeconomic measures (that is a student with a parental prestige labor activity of 23 points or less, a parental education level of the 6th grade or less, and with 10 books at home or less) were 47.90 points on the gender equality scale, 47.92 points on the immigrant equality scale, and 47.53 points on the ethnic equality scale; all below the scale average of 50 points. In contrast, the anticipated average scores for a student in the upper 5% distribution of socioeconomic measures (that is a student with a parental prestige labor activity of 74 points or more, parents with a university level education, and with more than 500 books at home) were all above the scale average of 50 points, being 53.13 points on the gender equality scale, 51.42 points on the immigrant equality scale and 52.13 points on the ethnic equality scale. The gap between the 5th and the 95th percentiles of the socioeconomic distribution indicated that gender equality showed the greatest variation (5.22 points), followed by ethnic equality (4.59 points) and finally immigrant equality (3.50).

Model 2 introduced gender and the immigration background of students to the socioeconomic measures, and showed there were consistent and significant differences in attitudes between boys and girls, and between immigrants and non-immigrants, as predicted by the demand hypothesis. Overall, girls showed more egalitarian dispositions toward immigrants, other ethnic groups and gender equality than boys. The gap between boys and girls on the gender equality scale

Table 7.3 Modeling socioeconomic measures as predictors of egalitarian attitudes

Variable	Model 1			Model 2		
	Gender equality	Immigrant equality	Ethnic equality	Gender equality	Immigrant equality	Ethnic equality
Status (HISEI)	0.037*** (12.672)	0.023*** (8.290)	0.030*** (10.047)	0.036*** (12.474)	0.027*** (7.523)	0.031*** (9.599)
Education (HISCED)	0.194*** (3.500)	0.119 (1.611)	0.143 (1.801)	0.269*** (5.085)	0.175*** (3.150)	0.199*** (3.092)
Books (HOMELIT)	0.636*** (10.994)	0.446*** (5.783)	0.609*** (7.701)	0.607*** (10.983)	0.502*** (7.486)	0.637*** (8.956)
Girl (ref: boy)				3.965*** (10.807)	2.526*** (10.353)	2.758*** (12.908)
Immigrant (ref: native)				0.799** (2.798)	5.029*** (8.485)	3.337*** (5.022)
Intercept	50.193	49.455	49.543	48.178	47.771	47.901
Variance within	82.461	85.428	85.339	78.316	82.153	82.578
Variance between schools	0.808	1.004	0.354	0.684	0.823	0.344
Variance between countries	14.517	11.084	10.238	14.4	11.98	10.481
Log likelihood	−1142045.757			−1110419.106		
M1a: Random effect of status				0.000* (2.148)	0.000** (2.633)	0.000* (2.414)
M1b: Random effect of education				0.052** (2.648)	0.069* (2.071)	0.089* (2.071)
M1c: Random effect of books				0.064** (3.450)	0.112** (3.236)	0.111** (3.250)

Notes t-values provided in parenthesis. *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

was 3.96 points, while in the case of immigrant equality and ethnic equality the gaps are 2.52 and 2.76 in favor of girls, respectively. Immigrant students showed more egalitarian dispositions toward immigrants and ethnic groups than non-immigrant students. The gap in gender equality dispositions between immigrants and non-immigrants is just 0.79 points, while for immigrant equality and ethnic equality the gaps are 5.52 and 3.34, respectively.

7.4.3 Differential Effects of Socioeconomic Background by Gender and Immigration Status (Hypothesis 3)

Model 3 (Table 7.4) tested the exploratory interaction hypothesis, and revealed the interaction between socioeconomic measures and gender (boy vs. girls), while model 4 (Table 7.5) revealed the interaction between socioeconomic measures and the immigration variable (non-immigrant vs. immigrant).

Model 3 results indicated that the interaction of gender with parental education and books at home was significant for the three dependent variables of tolerance,

Table 7.4 Interactions between socioeconomic measures and gender variables

Variable	Model 3		
	Gender equality	Immigrant equality	Ethnic equality
Status (HISEI)	0.035***	0.030***	0.032***
	(7.553)	(5.820)	(6.326)
Education (HISCED)	0.137*	0.100	0.097
	(2.123)	(1.680)	(1.347)
Books (HOMELIT)	0.504***	0.413***	0.526***
	(6.827)	(4.740)	(5.918)
Girl (ref: boy)	3.999**	2.540***	2.782***
	(11.020)	(10.598)	(13.309)
Immigrant (ref: native)	0.808**	5.035***	3.345***
	(2.828)	(8.466)	(5.018)
Status × Girl	0.001	−0.006	−0.002
	(0.209)	(−0.982)	(−0.347)
Education × Girl	0.259***	0.147**	0.198**
	(4.758)	(2.426)	(2.954)
Books × Girl	0.210**	0.181**	0.228**
	(3.007)	(2.334)	(2.950)
Intercept	48.16	47.764	47.887
Variance within	78.259	82.131	82.536
Variance between schools	0.685	0.823	0.343
Variance between countries	14.394	11.990	10.495
Log likelihood	−1110371.743		

Notes z-values provided in parenthesis. *$p \leq 0.05$, **$p \leq 0.01$, ***$p \leq 0.001$

Table 7.5 Interactions between socioeconomic measures and immigrant background

Variable	Model 4		
	Gender equality	Immigrant equality	Ethnic equality
Status (HISEI)	0.035***	0.028***	0.032***
	(11.544)	(6.939)	(8.785)
Education (HISCED)	0.282***	0.199***	0.217***
	(5.169)	(4.487)	(3.936)
Books (HOMELIT)	0.638***	0.565***	0.685***
	(11.155)	(8.370)	(9.473)
Girl (ref: boy)	3.963**	2.522***	2.755***
	(10.812)	(10.367)	(12.923)
Immigrant (ref: native)	0.641*	4.621***	3.038***
	(2.236)	(8.718)	(4.998)
Status × Immigrant	0.003	−0.017	−0.010
	(0.287)	(−1.651)	(−1.135)
Education × Immigrant	−0.114	−0.203	−0.162
	(−1.036)	(−1.214)	(−1.025)
Books × Immigrant	−0.354**	−0.705***	−0.532***
	(−3.624)	(−5.418)	(−5.347)
Intercept	48.179	47.775	47.904
Variance within	78.295	82.048	82.525
Variance between schools	0.685	0.826	0.341
Variance between countries	14.370	11.993	10.492
Log likelihood	−1110337.662		

Notes z-values provided in parenthesis. $*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$

whereas the interaction with parental status was not. For instance, the association between books at home with attitudes toward gender equality was $\pi\_3jk = 0.714$ ($\pi_{(books\_jk)} = 0.504 + \pi_{(books \times girls\_jk)} = 0.210$) for girls and $\pi_{(books\_jk)} = 0.504$ for boys. The interaction hypothesis predicted that the demand for equality would be less affected by resources for girls, so we expected a greater consensus among this group regarding tolerance, independent of socioeconomic background. In contrast, we found that, not only did girls exhibit more egalitarian dispositions toward gender equality than boys (demand hypothesis) but also that their scores were related to parental resources, including education and books at home. In other words, while girls of lower status were more tolerant than boys of lower status, the gap increased with socioeconomic background, and girls of higher status were even more tolerant than boys of the same status.

Model 4 tested the interactions between immigrant background and socioeconomic variables (Table 7.5). Here, the association between socioeconomic measures and egalitarian attitudes was weaker (less positive) for immigrant than for non-immigrant students (particularly in the case of number of books at home), as predicted by interaction hypothesis. For instance, the association between books at home with attitudes toward immigrant equality was $\pi_{3jk} = -0.140(\pi_{books\_jk} = 0.565 + \pi_{books*immig\_jk} =$
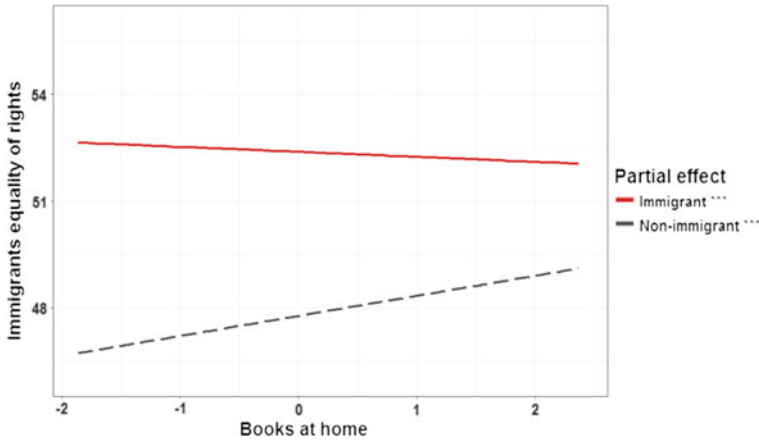
Fig. 7.1 Relation between books at home and immigrant equality attitudes, for immigrant and non-immigrant students

-0.705) for immigrant students and $\pi_{books\_jk} = 0.565$ for non-immigrant students. These results suggest that students with immigrant background show on average a higher demand for equality than non-immigrant students. Overall immigrant students who came from families with lower resources demanded higher equal rights and immigrant students who came from families with higher resources demand less equal rights than his/her immigrant pairs. Furthermore, this demand was focused on their own group, meaning increased support for equality was focused toward immigrants or ethnic groups, but not at the same level as gender equality.

In order to get a clearer understanding of this effect, we analyzed the relation between books at home and support for immigrant equal rights by both immigrant students and non-immigrants students (Fig. 7.1). We observed that immigrants showed stronger support than non-immigrants across all levels of books at home and, in households with more books, non-immigrants' support increased more strongly, reducing the gap between the two groups. In other words, the boost effect that we observed for girls now only applied to non-immigrants; this contrast is remarkable, as in one case the boost produced by parental socioeconomic background occurred for the disadvantaged group (girls), whereas in the other case it applied to the advantaged group (non-immigrants).

7.5   Discussion and Conclusions

In this chapter, our main goal was to analyze the extent to which egalitarian attitudes toward immigrants, ethnic groups and women differed according socioeconomic background and group variables. We based our hypotheses on the resources model of political participation, which indicates that people with higher resources show higher democratic dispositions, in this case, more egalitarian attitudes.

Our results supported the predictions of the resources model, holding true in most countries taking part in ICCS 2009. In general, and consistent with previous studies, students socialized in homes with lower resources showed less support for equal rights for immigrants, ethnic groups and women (Barber et al. 2013; Janmaat 2014; Dotti Sani and Quaranta 2017). Regarding the hypothesis of higher demand (support) for equality by disadvantaged groups, the analyses supported the prediction that those students belonging to those groups would show more egalitarian attitudes. Girls were more likely to demand equal rights for the three evaluated target groups (immigrants, ethnic and gender), and students from an immigrant background were more likely to support equal rights for immigrants and other ethnic groups. Note that girls' support for tolerance goes beyond mere self-interest, as this is not only related to gender equality but also to equal rights for immigrants and other ethnic groups.

The positive association between resources and egalitarian attitudes showed significant differences for immigrant students and female students. The association was stronger for girls than immigrant students, which indicates partial support for the interaction hypothesis. There were also differences between socioeconomic measures; parental education and books at home were strongly associated with egalitarian attitudes in the case of girls, while parental occupational status was not. Meanwhile, for immigrant students, only books at home differed significantly in its association with egalitarian attitudes.

Conceptualizing and operationalizing socioeconomic measures, we conclude that different indicators are related to specific aspects of stratification; while they show different degrees of correlation among them, they also show differential associations with the dependent variables, and so are not interchangeable. This suggests that research into political socialization processes within families should consider not only the differences between socioeconomic aspects of the family but also should analyze links to particular social groups, in order to explain citizenship outcomes.

The variations in the differential roles of socioeconomic measures for the development of egalitarian attitudes within different social groups suggest several topics for future research. For instance, further investigation is needed on the intersection between different groups and identities, such as immigrant girls and/or non-immigrant boys, as it is not clear whether the effects of belonging to a disadvantaged group could be counterbalanced by being part of another group. Similarly, the particular pattern observed for immigrants raises questions about cultural differences that would explain lesser support for equal rights for women. Future studies might also consider possible mechanisms to explain the differential roles of parental education or books at home in the development of democratic principles. Books at home is of great interest, as initially this indicator appears to be a simple measure, but may illuminate the role of cultural capital and/or scholarly culture (Evans et al. 2010, 2015) in support for equal rights.

Contact theory (Allport 1979) contends that, as opportunities for contact on an equal basis increase between groups and individuals, negative attitudes are reduced and positive attitudes are increased. Measures that allow the specification of different group experiences, such as intergroup interaction, cross-group friendship or perceived threat measures (Pettigrew 1998) could be used to characterize and model specific processes at different levels of socioeconomic status. ICCS 2009 did not include any measures of individual contact, such as level of friendship or frequency of contact, which would allow the analysis of the role of contact in the relation between socioeconomic measures and egalitarian attitudes toward disadvantaged groups. Further studies are needed in order to ascertain understanding of these issues.

Finally, the cross-country variation also suggest that there is scope for future international comparison; the results identify some countries have particular patterns that merit greater attention, including specific differences between non-immigrant and immigrant students and between boys and girls. This raises interesting questions about the role of intergroup identities and their relationship with egalitarian dispositions.

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Chapter 8
Teaching Tolerance in a Globalized World: Final Remarks

Maria Magdalena Isac, Andrés Sandoval-Hernández and Daniel Miranda

Abstract Each of the five empirical studies presented in this report aimed to identify factors and conditions that help schools and teachers to promote tolerance in a globalized world. Each study acknowledged the complex, hierarchical layers of explanatory mechanisms, while focusing on what could be learned from in-depth analysis of data collected by the International Association for the Evaluation of Educational Achievement's International Civic and Citizenship Education Study 2009. In this chapter, key findings are summarized, while acknowledging limitations and caveats, and avenues for further research are identified. The report findings also flag some potential implications for policymakers.

8.1 Key Findings

Each of the five empirical studies presented in this volume aimed to identify factors and conditions that help schools and teachers to promote tolerance in a globalized world. Each of them acknowledged the complex, hierarchical layers of explanatory mechanisms (see Chap. 1, Fig. 1.1), but reported in-depth on a particular topic and level of analysis. Chapter 2 provides a summary of the analytical strategy applied in each of the chapters.

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In Chap. 3, Miranda and Castillo aimed to examine, from a comparative perspective, the reliability and validity of the main constructs used to measure tolerance (attitudes toward equal rights). They applied a broader conceptualization and operationalized definition of tolerance as a set of three, interrelated attitudes toward the rights of women, immigrants and ethnic minorities. They investigated the cross-cultural comparability of these latent variables through empirical analyses of measurement invariance conducted in a factor-analytical framework (confirmatory factor analysis and multigroup confirmatory factor analysis models) applied to the International Civic and Citizenship Education Study (ICCS) 2009 data. By applying multigroup confirmatory factor analyses techniques in order to test the validity of the conceptual framework elaborated upon across the chapters of this book. They found that the three scales used to measure tolerance had the same structure and were equivalent across all the countries analyzed at the scalar level of invariance. By implication, direct comparisons of the mean scores and correlates of the three egalitarian attitudes across countries are empirically justified and can be interpreted in a meaningful way (Desa 2014, Rutkowski and Svetina 2014). Moreover, the analysis also confirmed that multilevel modeling was an adequate strategy for the estimation of the explanatory models. Chapter 3 provides a solid methodological and theoretical basis for all the comparative and multilevel analyses reported in the subsequent chapters, and contributes to the current research by providing empirical support to a broader conceptualization of tolerance based on the ICCS 2009 data.

In what can be considered a general study of factors associated with attitudes toward egalitarian values, Chap. 4 focused on the capacity of schools and other agents to promote positive attitudes toward diversity. Treviño, Béjares, Wyman and Villalobos aimed to analyze how several characteristics of schools and individuals shape student attitudes toward equal rights. Multilevel regression analyses conducted within countries showed both commonalities and differences in the explanatory mechanisms present across countries. The results provided important information that helped to determine the focus of the subsequent chapters. They first identified that individual and family characteristics had a stronger positive influence than schools across all the countries analyzed. Individual student characteristics, such as their interest in social and political issues and their support for democratic values, were related both positively and generally with young peoples' attitudes toward equal rights. In most countries, female students tended to exhibit more positive egalitarian attitudes. Further, and in agreement with previous studies (see, for example, Caro and Schulz 2012), an open classroom climate for discussion and participation in civic-related activities at school were the two school variables that exhibited the most consistent positive relationship with attitudes toward equal rights. This study also revealed the importance of country-specific contexts when examining the relationships between different school variables and the three indicators of tolerance. Different school composition or segregation variables (percentage of girls, immigrants and students belonging to an ethnic minority), and the socioeconomic composition of the school

population, show strong differential effects on student attitudes toward equal rights, indicating the need to consider both universal and context-specific theoretical frameworks.

In Chap. 5, Villalobos, Treviño, Wyman and Béjares set out to disentangle the effects of one of these school composition variables, which is also one of the most relevant sources of diversity in education nowadays: namely segregation of immigrant students. They paid particular attention to the strategies that educational systems employ to address this type of diversity and discussed in depth the issue of educational segregation of immigrant students within the education system. Focusing on the distribution, concentration and spread of immigrant students among schools and countries, Villalobos et al. aimed to understand how education systems generate mechanisms to include (or exclude) these students. The analyses described, from a comparative perspective, patterns of segregation in different educational systems and related them to student attitudes toward equal rights for immigrants. In addition to supporting similar findings signaled in Chap. 4, Villalobos et al. confirmed that individual student background characteristics (such as socioeconomic status) were stronger predictors of student attitudes of tolerance toward equal rights than school composition indicators. Moreover, country specific and differential effects highlight the importance of context showing, for example, that the level of segregation of immigrant students in schools is a predictive factor only in a few contexts and that the relationships between this factor and student egalitarian attitudes (although largely negative and moderate in magnitude) can be both negative and positive.

In Chap. 6, Carrasco and Irribarra focused on the importance of the school environment for the development of egalitarian attitudes. More specifically, they argued the importance of stimulating open classroom discussion, in which free dialogue and critical debate are encouraged among people of diverse backgrounds. Although the importance of an open classroom climate in the development of attitudes toward equal rights (mainly toward immigrants) is largely established by previous research, the work presented in this chapter makes a unique contribution to the field by: (a) demonstrating an appropriate treatment for individual and (aggregated) school-level measures of open classroom climate, (b) providing consideration of multiple measures of tolerance in relation to open classroom climate, and (c) providing estimations of both main and moderation effects. Their results confirm that, across countries, the level of openness to the discussion of political and social issues in classrooms during regular lessons was systematically related to student attitudes toward equal rights for woman, all ethnic groups and immigrants. Moderation effects are, nevertheless, context specific. More specifically, only one country (Austria) showed that an open classroom climate had a booster effect over students clustered in schools with disadvantaged student populations in terms of socioeconomic backgrounds.

In Chap. 7, Miranda, Castillo and Cumsille looked in-depth at individual background characteristics by testing whether young people with greater

socioeconomic resources showed more egalitarian attitudes. More specifically, they focused on determining the extent to which attitudes toward equal rights for immigrants, ethnic groups and women differed according to socioeconomic background and gender. In agreement with previous studies (Barber et al. 2013; Janmaat 2014; Dotti Sani and Quaranta 2017), they found that students socialized in homes with lower resources showed less support for equal rights for immigrants, ethnic minorities and women. However, unlike previous approaches, they were also able to shed some light on variations in these relationships between different groups of young people and between different socioeconomic measures, finding, for example, that girls and students from an immigrant background tended to be more in favor of equal rights. They also found that some measures of socioeconomic status (parental education and books at home) showed stronger associations with egalitarian attitudes for specific groups (girls), and that cross-country variation indicated country-specific patterns in relationships.

***Main Conclusions*:**

- International large-scale assessments, such as ICCS 2009, have the potential to tremendously improve the study of tolerance in youth, by providing the opportunity to analyze differing explanatory mechanisms in a multitude of multi-leveled contexts.
- Tolerance is a controversial, multifaceted and complex concept. In a restricted sense, in educational settings, tolerance can be conceptualized and empirically studied in terms of attitudes toward equal rights for three different social groups: immigrants, ethnic minorities and women.
- A broader conceptualization of tolerance (in terms of attitudes toward equal rights for immigrants, ethnic groups and women) can be applied to ICCS 2009 data, and the operationalization of the concepts developed in this report are universally relevant and comparable across a large number of cultural and educational settings.
- Attitudes toward equal rights for different social groups may be developed in harmony. Young people who are willing to support equal rights for immigrants and ethnic groups are also willing to endorse equal rights for women.
- Gender differences (favoring girls) in young people's egalitarian attitudes are notable. Girls tend to have more positive attitudes toward equal rights than boys. The positive attitudes of girls go beyond a mere self-interested demand. Girls do not only show higher endorsement of gender equality but also more positive attitudes toward equal rights for immigrants and ethnic minorities.
- Individual background student characteristics show a (relatively) stronger association with attitudes toward equal rights than school factors. In particular, the socioeconomic status of young people and their levels of

interest in social and political issues show strong links with students'
attitudes toward equal rights.

- Democratic school cultures and school climates that nurture classroom
  discussion and encourage free dialogue and critical debate among people
  of diverse backgrounds show particularly strong links with positive
  student attitudes toward equal rights. These relationships are largely
  consistent across educational settings around the world.
- Both universal and context-specific explanatory mechanisms must be
  considered when identifying factors and conditions that may help schools
  and teachers to promote tolerance.

8.2   Discussion and Implications

We argue that international comparative studies, such as ICCS 2009, provide
opportunities to study tolerance in youth. Analysis of such data may reveal differing
explanatory mechanisms in a multitude of multi-levelled contexts.

We sought to confirm extant research and identify the factors and conditions that
have the potential to help schools and teachers promote tolerance. We focused on
gathering evidence on: (a) broader conceptualizations of tolerance toward traditionally
disadvantaged groups, including attitudes toward the rights of immigrants, ethnic
groups and women, (b) the potential relationships among attitudes of tolerance toward
equal rights for different groups, (c) the strength of relationships between egalitarian
attitudes and variables measured at different levels (such as the individual, school, or
educational system level), (d) the complexity of direct and indirect (moderated)
relationships, and (e) the variation of these relationships across countries (common and
country-specific differential effects).

Our conceptualization of tolerance included attitudes toward the rights of three
different social groups: immigrants, ethnic minorities and women. In previous work
using the ICCS 2009 data, Schultz (2015) highlighted the importance of looking at
additional measures of attitudes toward equal rights; next to attitudes toward immi-
grants, Schultz showed the value of also examining attitudes toward equal rights for
ethnic minorities. Higdon (2015) followed a similar approach, demonstrating the
potential need to also consider attitudes toward women's rights. The analyses in
Chap. 3 make an important contribution to the literature by simultaneously taking
into account all three measures and extending the analyses from a subset of countries
to all 38 countries included in ICCS 2009. Miranda and Castillo thus provide
conclusive empirical support for a broader conceptualization of tolerance based on

the ICCS 2009 data, justifying not only the analyses presented in this report but also future comparative research on the topic.

Chapter 3 also indicates a clear interconnection between the three measures of tolerance, with positive associations ranging from 0.39 to 0.95 across measures and countries. Specifically, Miranda and Castello found that young people who were willing to support equal rights for immigrants and ethnic groups were also willing to endorse equal rights for women. Although this may seem an intuitive expectation, the strength or direction of such associations should not be taken for granted.[1]

This finding is extremely important for various formal and informal educational channels, because it suggests that positive attitudes toward equal rights for others may be developed in harmony.

Moreover, in Chaps. 4 and 7, the analyses revealed that girls tend to have more positive attitudes toward equal rights than boys and that the more positive attitudes of girls go beyond a mere self-interested demand, as their attitudes were not only related to gender equality but also to more positive attitudes toward equal rights for immigrants and ethnic minorities.

This in turn suggests the importance of replicating such findings in adult populations. If research confirmed similar results in an adult population, this would prompt questions such as: Would there be an increase the equal rights if women received the same political representation as men? Although the gender balance in decision-making positions has been steadily improving around the world, in most countries women are still underrepresented in political systems. For instance, in 2017 only 23% of the seats in national parliaments were occupied by women (Inter-Parliamentary Union 2017). Considering this, the equalization of political representation may be a powerful mechanism to promote the development of democratic principles both in schools and wider society. Furthermore, future research on this issue may reveal links between the implementation of democratic principles and more egalitarian representation of disadvantaged groups.

Chapters 4–7 examined the factors and conditions at different levels (especially student and school levels) that exhibited positive relationships with young peoples' attitudes toward equal rights for immigrants, ethnic groups and women. Chapters 4–6, in particular, demonstrated the (relatively) stronger effect of individual variables over school factors. Nevertheless, in agreement with previous research, both individual and school characteristics were found to be consistent (for the majority of countries and for all three tolerance measures included in the analyses) predictors of positive attitudes toward equal rights. Strong and consistent links with all tolerance measures were found for individual background student characteristics such as socioeconomic background (Chaps. 5 and 7) and student interest in social and political issues (Chap. 4). When considering school characteristics, the majority of our research reaffirmed the importance of democratic school cultures and the

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[1]Previous research (Barber et al. 2013; Isac 2015a) showed weak links and even negative relationships between other attitudinal civic outcomes measured in ICCS 2009.

beneficial effects of a school climate that nurtures open classroom discussion and encourages free dialogue and critical debate among people of diverse backgrounds (see Chap. 6). Other individual and school factors demonstrated differing associations that were group or country dependent. For example, the research in Chap. 7 highlighted differences in the strength of the association between different socioeconomic measures and attitudes toward equal rights for different groups of students (girls, immigrants). Chapters 4 and 5 showed that school composition variables (for example, the level of segregation of immigrant students in schools) showed strong country-specific differential effects on egalitarian attitudes. Chapter 6 confirmed that moderation effects, while worth investigating, are only relevant in a few specific contexts.

Combining these findings may provide useful guidance for educators and policymakers in designing school interventions aimed at promoting tolerance. Our research suggests that more attention (e.g. targeted interventions) should be paid to vulnerable and disadvantaged students (in terms of socioeconomic background, levels of knowledge and interest) and schools that serve disadvantaged student populations.

As the most promising school strategy, the research largely reinforces the importance of democratic school cultures. Encouraging students to discuss controversial issues and allowing them to make up their own minds while presenting several sides to the issues under discussion seems to be a promising teaching practice. Therefore, school interventions coupled with continuous teacher development programs aimed at promoting higher levels of open classroom discussion may prove effective. Nevertheless, as Carrasco and Irribarra mentioned in Chap. 6, teachers often find it difficult to engage in such discussion and, in many countries, they (as well as school leaders) indicate a strong need for professional development in this area (Van Driel et al. 2016). The need for the teacher to balance classroom discussion which is inclusive of different views, while also participating in those discussions with a personal position on the issues under discussion, requires not only high levels of teaching skill but also the confidence and freedom to tackle issues, including those which are potentially controversial in nature. Whole-school approaches involving institutional support from school authorities, the school community and parents may be crucial to helping teachers to introduce with confidence the discussion of controversial issues involving ethnicity, immigration and gender to the classroom.

The studies also indicate large heterogeneous findings across countries, pointing to the need to take into account the specificity of contexts and the differential effect that some school characteristics may have. Depending on the country context, heterogeneous school composition, or different levels of segregation of immigrant students may or may not create conditions for the development of egalitarian attitudes. It is also important to acknowledge that immigrant students are not a monolithic group. Depending on the country of destiny and specific family

situations, they can come from affluent contexts or from the most disadvantaged groups in society (Engel et al. 2014; Hastedt 2016). The same holds true for the potential compensatory effects of open classroom climates over students clustered in schools with disadvantaged socioeconomic backgrounds. Potential interventions aimed at promoting tolerance should include careful analyses of settings, which may provide further information on conditions for promoting success.

> ***Recommendations for Educators and Policymakers:***
>
> - Support interventions targeted at vulnerable youth (for example disadvantaged students in terms of socioeconomic status, levels of knowledge and interest) and schools that serve disadvantaged student populations.
> - Encourage school interventions coupled with continuous teacher development programs aimed at promoting democratic school cultures and climates.
> - Support teachers with continuous professional development, building the skills needed to address diversity and promote tolerance.
> - Involve and support collaboration between wider groups of stakeholders (for example, teachers, school authorities, parents, and local communities).
> - Carry out careful analyses of local settings to gain insights into context-specific conditions for promoting tolerance.

8.3   Limitations and Avenues for Future Studies

International studies, such as ICCS 2009, are invaluable resources for the study of tolerance in youth. Applying state-of-the-art methodological approaches to the rich data collected by ICCS 2009 has enabled us to address some interesting questions. Although cross-sectional large-scale assessment surveys may have their limitations, our view is that these are also opportunities for further research in the field.

Firstly, due to the cross-sectional nature of ICCS, we acknowledge that no causal inferences can be drawn from the results reported here. Therefore, we advise the reader to interpret the findings rather as starting points for discussion, formulating hypotheses and establishing patterns; hypotheses can be subsequently tested using rigorous interventions and impact evaluations. Similarly, complementary methodological approaches (such as qualitative case studies) may be adopted to disentangle the mechanisms causing the patterns identified in the data.

Secondly, as mentioned in Chap. 1, the concept of tolerance investigated here is complex and multifaceted. Although this report makes an important contribution to the field by considering multiple measures of tolerance and documenting their

validity in several educational systems, broader conceptualizations may be thought of when designing future research, including future international large-scale assessments of this kind. More specifically, the measure of tolerance may be further improved to capture not only political but also social tolerance (Weldon 2006; Quintelier and Dejaeghere 2008), attitudes of tolerance toward a wider range of groups (Caro and Schulz 2012; Forst 2003; Green et al. 2006; Mutz 2001), while perspectives oriented toward rejection of social groups (intolerance, discrimination) may be particularly useful for identifying youth at risk.

Lastly, this report has tackled the complexities inherent in the study of relationships between differing classroom factors and student attitudes toward equal rights. Among such issues, we note that the ICCS 2009 was designed to sample one intact class per selected school in most countries. For this reason, school and classroom levels are confounded. Therefore, results concerning the relevance of school factors in relation to attitudes toward equal rights must be interpreted with caution. Future research could address the need to better differentiate both theoretically and empirically between school and class-related factors and their relationship to young peoples' egalitarian attitudes (using sampling strategies targeting more than one class per school). Complex methodological and theoretical questions pose further aspects for reflection, including identifying the most appropriate measurement models for students' ratings of classrooms, addressing plausible endogeneity in modelling multilevel data, and unfolding the complex explanatory mechanisms (the why, how, and when) that link classroom factors to student attitudes (see Stapleton et al. 2016).

> *Recommendations for Further Research:*
> - Interpret correlational findings only as starting points for discussion, formulating hypotheses and establishing patterns.
> - Complement knowledge acquired through correlational studies with rigorous impact evaluations and qualitative studies.
> - Develop even broader conceptualizations of tolerance that take into account its complex and multifaceted nature.
> - Address the need to better differentiate both theoretically and empirically between school- and class-related factors that are related to tolerant attitudes.
> - Reflect on complex methodological and theoretical questions, such as identifying the most appropriate measurement models for students' ratings of classrooms and addressing plausible endogeneity in modeling multilevel data.
> - Unfold the complex explanatory mechanisms (the why, how and when) that link classroom factors to student attitudes.

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Appendix
Segregation Index Based on Olsson and Valsecchi (2010)

In a study on ethnic cleansing in Darfur (Sudan), Olsson and Valsecchi (2010) proposed the following segregation index:

$$S = \frac{1}{J-1} \sum_{j=1}^{J} \sum_{i=1}^{J} \frac{Pi}{P} \left(\pi i^j - \pi^j \right) / \pi^j$$

where i is each individual of the reference group (in our case, an immigrant student), and j is the unit of distribution (the school). This index essentially compares the proportion of an ethnic group in a specific location πi^j, with the average proportion of the group in the geographical unit as a whole, weighted by the relative size of the local unit P_i/P and then divided by the number of existing groups. $S = 0$ if the different ethnic groups live together at each locality with exactly the same proportions as on the aggregate level, whereas $S = 1$ if, for instance, three different groups live exclusively at three homogenous locations (Olsson and Valsecchi 2010, p. 9) (Table A.1).

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Table A.1 Olson and Valsecchi (2010) segregation index

Country	Index	Country	Index
Colombia	0.0003269	Denmark	0.0012625
Korea, Republic of	0.0003631	Ireland	0.0013310
Mexico	0.0003798	Cyprus	0.0014203
Chinese Taipei	0.0003939	Paraguay	0.0014369
Chile	0.0004317	Switzerland	0.0015867
Czech Republic	0.0005172	Spain	0.0016092
Indonesia	0.0005902	Latvia	0.0016616
Dominican Republic	0.0006106	Estonia	0.0017221
Bulgaria	0.0006470	Thailand	0.0018051
Poland	0.0006838	Sweden	0.0018312
Guatemala	0.0007215	New Zealand	0.0019635
Russia	0.0007311	Belgium (Flemish)	0.0020416
Slovakia	0.0007394	Hong Kong	0.0022103
Lithuania	0.0007825	Austria	0.0022345
Malta	0.0010370	Norway	0.0023204
Greece	0.0010828	England	0.0031544
Italy	0.0011137	Netherlands	0.0037017
Slovenia	0.0011633	Luxembourg	0.0048057
Finland	0.0012311	Liechtenstein	0.0094308

Note The mean segregation index for all countries is 0.0009145