In memoriam Jaap Donkers

**PETER ROBERT**
Differentiation in Education and Beyond
Introduction to the Special Issue in Memory of Jaap Dronkers (1945-2016)

**MARLOU J. M. RAMAEKERS, MARK LEVELS, JAAP DRONKERS† & GERBERT KRAAYKAMP**
Explaining civic attitudes of immigrant children in Europe

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Education is not about SES
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In memoriam Jaap Donkers

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Schooling plays a crucial role in distribution of social inequalities. The important lesson, social scientist can learn from Pierre Bourdieu states that social differentiation, students bring into the school from home, does not diminish during the years they spent in education. In fact, schools compensate only a little amount of the deficit connected to pupils’ family background. Instead, a hidden curriculum is in effect aiming the transmission of social norms, values and beliefs that regulate how people should properly behave in the society (Illich 1971, Bourdieu 1974, Giroux & Purpel 1973). Nevertheless, schools differ in the way how students with disadvantaged social background are handled or how educational achievement in schools is affected by students’ social origin. Among others, variation in this regard can be related to the public vs. private dissimilarities between schools in terms of the school environment, in particular to the social capital around the schools, e.g. the relationship between teachers and pupils and parents in state-run vs. church-run schools (Coleman et al. 1982, 1987). Given that school quality varies a lot, in terms of educational achievement and its relationship to school composition by pupils’ social background, access to better or worse education matters a lot. School choice is highly important; various forms of selections and self-selections are taking place in the decision process until students end up in one or another school (Hoxby 2003). Making the circle round, the various characteristics of social origin, a wide range of social and psychological conditions in the parental family largely influence school choice and educational decisions. These are the so-called ‘secondary effects’, following the term by Boudon (1974). Empirically, researchers can focus on various indicators and attributes of parental background and investigate how cultural and educational climate in the family

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is affected by parental education, financial conditions, family composition, e.g. the intact or broken character of the family.

Apparently, research on educational inequalities (or on ‘equality of educational opportunity’ – using the term by Coleman) cannot be restricted to the themes, I outlined above. I decided to emphasise them because these were the topics mainly investigated by Jaap Dronkers. In terms of a ‘catalogue’, he published hundreds of articles and book chapters on inequality of educational opportunities, school quality, educational system comparisons, effect-differences between public and religious schools, educational and occupational achievement of migrants from different origins and in various countries of destination, the effects of parental divorce on children – and nobility.\(^2\) His work career is also impressive; he worked from 1990 until 2001 at the University of Amsterdam, first as Full Professor in Educational Science (1990–1999), and later as Dean of the Faculty of Educational Sciences and Pedagogy. From 1999 to 2001, he was Full Professor of Sociology at the University of Amsterdam, too. Following a Professorship at the European University Institute (EUI) in Florence, Italy (two consecutive terms: 2001–2009), he returned to The Netherlands and became Honorary Professor at the University of Maastricht until his death. As one of the important milestones during his career, I would like to mention, the project when he has been the Director of the European Forum “The Quality of Education and its Relationships with Inequality in European and Other Modern Societies”, during 2006–2007. This project has led to the edited volume Quality and Inequality of Education published by Springer (Dronkers 2010). Similarly worthwhile to refer to the two special issues on ”Cross-National Studies in Student Performance With PISA and TIMSS Data” and “Education Markets and School Choice” for which Jaap has been a Guest Editor in the Educational Research and Evaluation. These days, scholars are evaluated by the impact factor they achieve with their major articles in peer reviewed journals. No doubts that Jaap had an impact in his field on the academic activity of his colleagues as shown by the citations of his work. In order to illustrate this in a quantitative manner, (as talking about a quantitative sociologist), I copy the data of his five best cited items from the Google Scholar.

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\(^2\) This latter topic Jaap labelled as ‘hobby research’ and he studied the education of Dutch and European elites and nobility.
This table mirrors the variety of the research topics analyzed by Jaap, perfectly. One finds example of studying immigrant children, consequence of divorce on educational attainment, and difference in achievement by public vs. private sector of schooling. This table also reveals that Jaap used to work in team and enjoyed to collaborate with other scholars, co-authors. Personally, I am proud and honoured that I could be part of his European Forum project and we could work together on Hungarian state and religious schools (Dronkers & Róbert 2004).

The research activity by Jaap Dronkers had an impact on the Hungarian academic life and influenced Hungarian researchers dealing with pedagogy and educational studies, as well. Just one example is the Graduate School in Educational Studies at the University of Debrecen, organised and directed by Prof. Gabriella Pusztai. She has also been the editor of a special issue of the Hungarian language journal Educatio titled ‘Churches and Education’ in 2005 and edited important volumes on the relationship between religion and higher education in the CEE region (Pusztai 2008, 2010). In fact, she had a leading role in initiating this special issue, as well.

The portrait of Jaap Dronkers would be less complete without mentioning his active participation in public debates in the Dutch media, among others on the ranking of the secondary schools. Perhaps the best description on Jaap Dronkers is given by Patrick Wolf (2016:137) when characterizing him as a six-tool social scientist who had courage in his choice of topics, a firm grasp of theory, refined empirical analysis skills, strong writing ability in multiple languages, effective public speaking skills, and a delightful sense of humour.

The current issue presents three articles by distinguished scholars who were so kind to support the intention of HERJ to make a memorial publication for Jaap Dronkers. The first paper is an analysis by a team of Dutch scholars and, most importantly, this is a paper Jaap personally has worked before his death; so he is listed among the authors, namely Marlou J. M. Ramaekers, Mark Levels, Jaap Dronkers, Gerbert Kraaykamp. HERJ is honoured that the authors offered this piece to get published here. The paper investigates civic attitudes of immigrant children, aged between 12 and 17, studying in schools in Austria, Belgium, Cyprus, Denmark, Greece, Latvia, Liechtenstein, the Netherlands, Norway, Poland and Switzerland. Three types of attitudes are distinguished as dependent variables in the study: support for democracy, support for gender equality, and attitudes towards the country of destination. These attitudes can be regarded as elements of cultural integration

3 For details see: http://www.talkinbusiness.nl/2014/01/the-dronkers-list-an-important-assessment-of-school-quality/
of first and second generation immigrant children into the Western World. Apparently, an important explanatory factor of this process is religion and denomination of the children. Empirical findings confirm this assumption, in particular for the latter two opinions. The multivariate models, developed by the authors, also reveal that the essential driving force in generating civic attitudes is church attendance and the attitudes towards the influence of religion in society.4

The second article is written by Gary Marks, an Australian scholar who has played a key role in developing measurements in OECD’s PISA studies and published extensively on many aspects of educational outcomes and of inequalities in schooling. Gary was one of the invitees to the European Forum directed by Jaap Dronkers to come to the EUI, Florence and to work in the frame of the project. His current paper in HERJ deals with the causal influences affecting student achievement and educational attainment from a highly debated perspective, discussing and comparing the role of SES, socio-economic differences and of cognitive abilities. Already the title of his piece is provocative, stating that Education is not about SES. The article is a conceptual one without any quantitative empirical analysis but it contains an extensive literature based on studies applying survey materials and investigating the relationship between socio-economic measures, cognitive ability and educational outcomes. Gary Marks reviews the concept of cognitive ability by considering its genetic component, too – a highly sensitive factor from the perspective of political correctness. Socio-economic status is discussed both from a theoretical and a measurement viewpoint. The section on research conclusions, based on the empirical literature compares the findings on how SES and cognitive ability can predict various educational outcomes (student achievement, school tracking, and educational attainment). In sum, Gary Marks argues about the significance of cognitive ability in analysing and predicting educational outcomes, underlining its importance from the perspective of policy makers and stakeholders.

The third article in the collection is written by M. Danish Shakeel and Patrick J. Wolf from University of Arkansas. This paper returns to the subject of ethnicity but its viewpoint is more concrete and explicit, as it deals with a striking concern of the era, the terrorism. Nevertheless, the authors’ approach is fully in line with the tradition of the work by Jaap Dronkers on examining educational outcomes, when raising the question: does private Islamic schooling promote terrorism? Thus, the topic is studied in the light of public vs. private differences in schooling. Indeed, the Western World continuously tries to understand the motivation of terrorists and their criminal actions when the persons were born / raised / educated in Western societies where they commit their terrorist attacks. Experts tend to talk about the importance of parental background in terms of religiosity, traditional norms and values at home and their role in personal radicalisation leading to terrorist actions. Apparently, education also contributes to socialisation of youngsters

4 The authors have carried out a large amount of additional analyses in order to investigate the robustness of their findings. HERJ could not publish all appendices they have originally submitted due to the limitations of the length of the papers accepted by the journal. Thus, supplementary analyses are available from authors upon request.
and these two factors, home environment and schooling, can even strengthen each other, namely family climate has an impact on school choice. However, the obvious expectation on this ground, assuming that (traditional) Muslim families tend to send their offspring to Islamic schools (school choice) and then these schools generate radicalism and socialize them to become a terrorist (education) is not supported by the article. On the contrary, results confirm previous findings on the role of private / religious schooling in producing civic values in contrast to public education. At the same time, low number of observations is a limitation the study; the authors label their work more explorative than causal. Still, when concluding about policy implications, they underline the lack of the empirical evidence for any connection between religious Islamic schooling and terrorism in the US.

As editor of this special issue, I am very glad to present the three articles to the readers of HERJ because of two reasons, at least. First, I am honoured that I could be part of this project “in memoriam Jaap Dronkers”. I am grateful to the fortune that we had an opportunity to work and publish together. Second, the issue presents three articles that deal with educational inequalities, a topic I am highly interested in. At the same time, however, these articles go beyond the usual approach of educational differentiation, go beyond the usual role of family background, the reproduction of cultural capital. Instead, they enter into a level where the real disputes on schooling begin these days. Two of them place schooling into a highly relevant frame of the era: migration and terrorism. The third one dares to raise an uncomfortable issue: the role of cognitive ability and genetics in the variation of educational outcomes. I hope, readers of HERJ also find these three papers to be interesting and inspiring for further debates.

References


Explaining civic attitudes of immigrant children in Europe

Marlou J. M. Ramaekers⁵, Mark Levels⁶, Jaap Dronkers†, Gerbert Kraaykamp⁷

Abstract

In this study, we investigate explanations for differentiation in civic attitudes among immigrant children from different religious groups. We use the 2009 International Civic and Citizenship Study data to explore differences between religious groups on three key civic attitudes: support for democracy, support for gender equality, and attitudes towards the country of destination. We analyse N=5454 immigrant students in eleven European destination countries using OLS regression with origin and destination country fixed effects. Our results, firstly, show that Orthodox Christian and Islamic immigrant children are less in favour of gender equality than secular immigrant children. Different attitudes towards the role of religion in society explain most of this variation. Secondly, Islamic, Protestant and Catholic immigrant children are more likely to think positively of their destination country than secular and Christian Orthodox immigrant children. These differences can be explained by church attendance and attitudes towards the influence of religion in society.

Keywords: immigrant students, civic attitudes, religious groups

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Introduction

To what extent does religion matter for the cultural integration of immigrant children in Western countries? Literature on civic behaviours and attitudes shows that not only social demographic characteristics, such as gender (Torney-Purta, Lehman, Oswald & Schulz, 2001; Miklikowska & Hurme, 2011, p. 550) and age (Diehl, Koenig & Ruckdeschel, 2009) are related to civic behaviour and attitudes, but that religion also is of importance (Graaf & Ruiter, 2006; Diehl, Koenig & Ruckdeschel, 2009; Putnam & Campbell, 2010; Schulz, Ainley, Fraillon, Kerr & Losito, 2010). Principally, religious communities stimulate people to participate in debates or decision-making processes, helping them to practice skills needed for citizenship (Van Gunsteren, 1992; Fermin, 2000), and religious citizens are also more likely to volunteer than secular citizens (Ruiter & de Graaf, 2006). It further seem clear that religious people are generally less in favour of equality between the sexes (Seguino, 2011; Mikołajczak & Pietrzak, 2014). Additionally, civic attitudes and behaviours have been found to differ between various denominations (Lam, 2002; Ruiter & De Graaf, 2006). For instance, Protestants are more likely to volunteer, and to be a member of a voluntary organisation than Catholics (Lam, 2002; Ruiter & De Graaf, 2006), and Catholics and Orthodox Christians are more supportive of democracy than Protestants and Muslims (Ben-Nun Bloom & Arikan, 2012).

The extent to which these notions apply to immigrant children is not widely studied. Religion is only scarcely used in research looking at immigrants' civic attitudes (Karlsen & Nazroo, 2015; Norris & Inglehart, 2012; Roder, 2014). For immigrants, religious groups are closely related to citizenship, as religious communities are important places for them to practice democracy and to position themselves in the public domain (Eck, 2001; Allen, 2010). Research on the explanation of civic attitudes of immigrant children is however limited (Kim, 2013). Therefore, our first objective is to describe the extent to which immigrant children of various denominations and secular immigrant children hold different civic attitudes. Our second and main objective is to explain why religion matters for immigrant children’s civic attitudes. To do so, we explore four main explanations. First, we consider children’s attendance of religious services to explore the extent to which this can explain differences. Secondly, we explore the role of institutional trust, and thirdly we examine children’s attitudes toward the role of religion in society. Fourthly, civic competences and knowledge are considered as an explanation for the differences between immigrant children from various religious groups. In our analyses, we deal with confounders of socioeconomic nature, and for region of origin, and country of destination. This way, we can be sure that found differences are not due to differences between socioeconomic, ethnic or national groups, but refer to actual differences between religious groups.

Our study focusses on three types of civic attitudes. First, support for democratic values, such as freedom of expression and the freedom to criticize government is investigated. These values are at the core of liberal democracy and essential to the civic republican model (Hoskins & Kerr, 2012). Second, we address attitudes towards gender equality,
because they exemplify the general idea of equity. Third, we focus on attitudes towards the destination country that encompass national pride and satisfaction with the country’s functioning. Since our study is limited to European democratic countries', satisfaction with the functioning of a destination country implies the support for a liberal democratic ideology. In order to explore the relationship between religion and three types of civic attitudes, we will address the following questions in this paper: 1) To what extent do religious and non-religious immigrant children and immigrant children of various denominations differ in their civic attitudes? And 2) To what extent can these differences be explained by religious service attendance, institutional trust, attitudes on the role of religion in society and civic competences and knowledge?

In order to answer our research questions we derive hypotheses from various sociological notions. We use the International Civic and Citizenship Study [ICCS] data from 2009 to test these hypotheses. This dataset refers to the civic behaviours and attitudes of eighth-grader generally thirteen or fourteen years old. We will restrict or analyses to immigrant children in destination countries in Europe. Employing OLS regression, we assess the differences between religious and non-religious immigrant children, and between immigrant children with various religious denominations.

Before turning to theory and hypotheses, it is important to address how we understand civic attitudes. Civic attitudes are seen as being related to effective and efficient citizenship, and in liberal democracies, they are indicative of the extent of adherence to democratic rules and prevailing cultural values. Citizenship however is not an objective concept; it is largely normative. What is considered good citizenship or being a good citizen is likely different in different groups, in different times and in different places. So, no absolute set of rules is existing about what a good citizen should do and think, but many (Hoskins & Kerr, 2012). In this paper, we employ and advance the so-called civic republican model of citizenship. This model emphasizes the need for citizens to learn civic competences including values on which liberal democracy is founded (Hoskins & Kerr, 2012). Put differently, people are learned to believe that everyone should be able to express their own opinion, that people elect freely their own leaders and that everyone should be treated equally by the law and by all others. Whenever we refer to citizenship in this study we will allude to this civic republican model. We will not discuss whether this is the correct or best characterisation of citizenship. Our goal is mainly to explore the extent to which attitudes linked to this notion of citizenship are supported by immigrant children. The question whether these civic attitudes actually make immigrant children “good” citizens is a philosophical one, and lies beyond the scope of this paper.

**Theory**

The origins of civic attitudes

Civic attitudes already arise at a very young age, sometimes as early as the age of six. Although children of this age rarely understand the complexity of politics and society, they
are capable of categorizing and developing social identities that could be seen as politically relevant (Bennett & Sani, 2003). Moreover, children from the age of six already display value orientations about gender equality and civic virtues (Abendschon, 2013). According to Bandura’s social learning theory (1977), children acquire these orientations and values by observing others and imitating role models. People transmitting values to children are not necessarily consciously teaching children. Instead, children can learn values from any behavior, even if a person that is observed or imitated, is unaware.

In early childhood, parents are considered the most important socializing agents for their children (Grusec & Davidov, 2008). This is not surprising given that young children spend most of their time at home with their family. From the literature on political socialization literature also arguments are found that early socialization on civic values starts in the family (Abendschon, 2013). Although parents likely have a lasting impact on their children (Siongers, 2007; Bowers, 2009; Dostie-Goulet, 2009; Brañas-Garza, Espinosa & Giritligil, 2013; Koskimaa & Rapeli, 2015), other socializing agents are influential when children are maturing. Especially, teachers at school and friends are found responsible for transmitting political attitudes in late adolescence (Koskimaa & Rapeli, 2005). Both provide role models that children may observe and imitate. Prior research, for instance, showed that political attitudes of adolescents are partly understood by looking at political attitudes of close friends (Dostie-Goulet, 2009; Koskimaa & Rapeli, 2015). Finally, schooling is seen as a main factor. Through programs in civic education children learn the values that governments deem important for becoming an active participating citizen in society. Learning civic attitudes in the school setting however is not voluntary, which makes this type of socialization less effective than learning from family and friends (Dostie-Goulet, 2009; Koskimaa & Rapeli, 2015). Besides primary socializing agents, secondary parties, such as religious groups, are considered relevant for the socialization of civic attitudes as well (Manza & Brooks, 1997; Ojeda & Hatemi, 2015). This is the focus of our paper, and therefore we discuss the relationship between religion and civic attitudes below.

The role of religion and denominations

In literature, two theoretical notions arrive at opposing ideas on the association between religion and civic attitudes. First, one part of the literature claims that religion makes people to have more positive civic attitudes. Moreover, it is argued that religious individuals are more likely to engage in civic behaviours and to possess more civic competences. Belonging to a religious group would enhance a person’s formal social capital (Smith, 1999; Crystal and DeBell, 2002; Foner and Alba, 2008), and nurtures institutional and interpersonal trust (Putnam, Leonardi & Nanneti, 1993), which makes people more willing to invest time, money, and effort in a community and in society. Additionally, it is presumed that religiosity would promote behavioural norms closely related to citizenship, such as donating to charity and helping others (Grundel & Maliepaard, 2012; Smith, 1999). From these notions it could be supposed that positive effects of religion on civic behaviours spills over to civic attitudes. This spill-over
assumption, however, has not been confirmed by empirical research. We therefore assume this mechanism mainly applicable to civic behaviour, and not to civic attitudes.

Second, a contrasting literature assumes a negative relation between religion and civic attitude; religious people would have less positive civic attitudes than secular people. In this tradition it is stated that the basic values underlying religiosity and democracy inherently oppose each other (Ben-Nun Bloom & Arikan, 2013). Religion is based on the belief that there is a transcendent and all-encompassing truth. In order to be a good citizen according to the civic republican notion of citizenship a person has to be critical and open to change. Moreover, democratic values emphasize independence reasoning; citizens have the right to believe, act and think autonomously. Religion, on the other hand, emphasizes the duties of believers in a God and his followers. In empirical research, this tradition finds most support. Generally, religiosity is negatively associated with openness to change and self-expression values (Saroglou, Delpierre & Dernelle, 2004), both closely related to democratic values (Inglehart and Welzel, 2005). Further, religious people seem less in favour of gender equality (Seguino, 2011; Mikołajczak & Pietrzak, 2014), and hold more traditional opinions on gender roles (Mikołajczak & Pietrzak, 2014). Because the idea of a negative association between religious adherence and civic attitudes is supported by more empirical research, our first hypothesis reads: Religious immigrant children are less supportive of democracy (a), gender equality (b), and are less positive towards their democratic destination country (c) than secular immigrant children.

Although we expect that religious and secular immigrant children will differ in their civic attitudes, not all religious immigrant children will differ to the same extent from their non-religious counterparts. The gap between secular and religious immigrant children may be larger for immigrant children adhering to denominations that are culturally less close to Western liberal democratic values. Below we discuss why denominations would differ. It is important to acknowledge that all religions hold their own view on the world, how it should look like, and what cultural norms and values should prevail. These norms and values guide devotees through life, providing them with a framework fit for all their actions. Consequently, religious norms and values may unintendedly have an impact on situations, behaviour and attitudes that are hardly related to religious notions. A classic example would be the relation between Protestantism and capitalism. Even though Protestantism does not explicitly state how one should behave financially, it does promote working hard and frugally spending money, thereby providing Protestants with cultural norms that fostered the rise of capitalism (Weber, 1905). Another example is provided by Huntington (1996) who argued that certain civilizations are more compatible with democracy, than others because their culture matches democratic values, such as the separation between church and state, better. So it seems that in denominations different cultural norms exist that may lead to different notions of citizenship and civic attitudes (Verba, Scholzman & Brady, 1995). It is found that Muslims and Hindus are generally less in favor of gender equality, than people who adhere to a Christian religion (Seguino & Lovinsky, 2009). Moreover, Orthodox Christians, Jews, Catholics and Muslims hold more
pro-democratic attitudes than Evangelicals (Ben-Nun Bloom & Arikan, 2012). Because prior research does not unequivocally show how denominational differences are translated in civic attitudes, we do not formulate a directional hypothesis. We expect that: *Differences in the support for democratic values (a), gender equality (b) and attitudes towards their democratic destination country (c) exist between immigrant children of different denominations.*

**Explaining denominational differentiation of civic attitudes**

*Attending religious services*

Attending religious services is often seen as a sign of being integrated in a religious community, because one meets fellow believers and more easily becomes actively involved (Carabain & Bekkers, 2010). It therefore is likely that the degree of integration in a religious denomination affect a person’s norms and values; more integration leads to more adherence to particular religious norms. Indeed, several studies report that attendance of religious services is related to more civic behaviour. It would have a positive effect on volunteering (Bekkers, 2005; 2007) and on giving charitable donations (Berger, 2006; Bekkers, 2011). Additionally, it is found that people who attend religious services are more likely to vote (Jones-Correa & Leal, 2001; Coffe and Bolzendahl, 2010), to be a member of a political party and involved in political action (Coffe & Bolzendahl, 2010). Likely, this idea applies to civic attitudes and values too. Indeed, research showed that religious attendance is positively associated with political, civil and social citizenship responsibilities for Christians (Bolzendahl & Coffe, 2009). Moreover, Catholics, Muslims, Christian Orthodox and Evangelicals who show more social religious behaviour endorse democracy more, are more supportive of democratic procedures and regard democracy as a more desirable way of governing (Ben-Nun Bloom & Arikan, 2013). Because people of different denominations obviously differ in their frequency of religious attendance (Cadge & Ecklund, 2006; Connor, 2009), it is expected that they differ in their civic attitudes as well. Our explanatory hypothesis reads: *Differences in the support for democratic values (a), gender equality (b) and attitudes towards their democratic destination country (c) decrease if controlled for religious services attendance.*

*Attitudes on the role of religion in society*

Religious and non-religious people have different opinions on the role of religion in society. Likely, when an individual sees religion as extremely relevant in personal life, religious rules are considered important for society as well (Schulz, Ainley, Fraillon, Kerr & Losito, 2010). Therefore, it may be expected that religious immigrant children will think more positively on an active role of religion for society than secular immigrant children. Additionally, immigrant children from different denominations may vary in their views on the role of religion in society. Based on specific religious beliefs and rules, in each
community specific norms exist, among those on the broader role of religion, that largely are followed by adherents (Van Tubergen & Sindradottir, 2011).

The opinion that religion should have a large role in the working of society principally is in contrast with the notions of separation of church and state prominent in most democracies. In addition, various religious denomination holds restrictive ideas on gender equality and freedom of expression that are in conflict with the civic values underlying democracy (Ben-Nun Bloom & Arikan, 2013). Hence, the view that religion should have a large role in society is in contradiction with ideas on modern civic attitudes and behaviours. From this reasoning the next hypothesis states: Differences in their support for democracy (a), gender equality (b) and attitudes towards the democratic destination country (c), between religious and secular immigrant children and between immigrant children of different denominations decrease if controlled for attitudes on the role of religion in society.

Civic competences and knowledge

Having civic competencies may also affect a person’s civic attitudes (Janowitz & Marvick, 1953; Torgler & Dong, 2008; Cheng, Bynner, Wiggins & Schoon, 2012; Barber, Torney-Purta, Wilkenfeld & Ross, 2015). Civic competency not only leads to more political participation (Cohen, Vigoda, Samorly, 2001; Becker, 2004; Coffe & Bolzendahl, 2010), but it also endorses certain civic values (Janowitz & Marvick, 1953; Torgler & Don, 2008). For example, people who discuss political issues and are more interested in politics seem less likely to regard corruption as justifiable (Torgler & Dong, 2008). Moreover, political interest and support for gender equality are related (Cheng, Bynner, Wiggins & Schoon, 2012); those interested in politics are more likely to endorse equality between the sexes. Also, people who possess more civic knowledge are more tolerant (Delli Carpini & Keeter, 1996), they show more support for women’s rights and find it more important that citizens have the right to criticize the government (Janmaat, 2008).

Adhering to a religion and having civic competences may be positively related (Attar-Schwartz & Ben-Arie, 2012; Grundel & Maliepaard, 2012; Coffe, 2013); religious communities would teach their members civic skills, such as political efficacy and political interest. It is however clear that the nurturing of civic competences is mainly related to supporting their own community members (Verba, Scholzman & Brady, 1995). Consequently, the nurturing of civic competences is different in different denominations (Grundel & Maliepaard, 2012). It is therefore that we expect that: Differences in their support for democracy (a), gender equality (b), and attitudes towards the democratic destination country (c), between religious and secular immigrant children and between immigrant children of different denominations increase if controlled for civic knowledge and competences.
Data

We use the International Civic and Citizenship Study [ICCS] data from 2009 (IEA, 2009) to test our hypotheses. Initially, the ICCS data were collected in 38 countries (Brese, Jung, Mirazchiyski, Schulz, Zuehlke, 2011). Since our interest lies with democratic Western values, we only use the data collected in Europe. Countries further were excluded for several reasons. First, countries were excluded if there was no information available on the religion of immigrant children. This concerned Estonia, Finland, Italy, Slovenia, Spain and Sweden. Moreover, England was excluded because it was impossible to differentiate between the various Christian denominations. Second, countries were excluded without information about the country of origin of immigrant children. This applied to Bulgaria, Ireland, Lithuania, Luxembourg, Malta and Slovakia. Third, we excluded the Czech Republic because its measurement of civic attitudes did not correspond with all other countries, possibly pointing at a limited cross-cultural validity. In the final analyses eleven countries were included: Austria, Belgium, Cyprus, Denmark, Greece, Latvia, Liechtenstein, the Netherlands, Norway, Poland and Switzerland.

Table 1: Overview of reasons for the exclusion of countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Include/excluded</th>
<th>Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Included</td>
<td></td>
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<tr>
<td>Belgium</td>
<td>Included</td>
<td></td>
</tr>
<tr>
<td>Bulgaria</td>
<td>Excluded</td>
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</tr>
<tr>
<td>Cyprus</td>
<td>Included</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Excluded</td>
<td>Factor structure is different from all other countries</td>
</tr>
<tr>
<td>Denmark</td>
<td>Included</td>
<td></td>
</tr>
<tr>
<td>England</td>
<td>Excluded</td>
<td>It is impossible to differentiate between different Christian denominations</td>
</tr>
<tr>
<td>Estonia</td>
<td>Excluded</td>
<td>No information on religious background of children</td>
</tr>
<tr>
<td>Finland</td>
<td>Excluded</td>
<td>No information on religious background of children</td>
</tr>
<tr>
<td>Greece</td>
<td>Included</td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>Excluded</td>
<td>No information on country of origin</td>
</tr>
<tr>
<td>Italy</td>
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<td>No information on religious background of children</td>
</tr>
<tr>
<td>Latvia</td>
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<tr>
<td>Liechtenstein</td>
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<td>Lithuania</td>
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<td>Luxembourg</td>
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</tr>
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<td>Malta</td>
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</tr>
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<tr>
<td>Poland</td>
<td>Included</td>
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<tr>
<td>Slovakia</td>
<td>Excluded</td>
<td>No information on country of origin</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Excluded</td>
<td>No information on religious background of children</td>
</tr>
<tr>
<td>Spain</td>
<td>Excluded</td>
<td>No information on religious background of children</td>
</tr>
<tr>
<td>Sweden</td>
<td>Excluded</td>
<td>No information on religious background of children</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Included</td>
<td></td>
</tr>
<tr>
<td>The Netherlands</td>
<td>Included</td>
<td></td>
</tr>
</tbody>
</table>

Since our hypotheses concern immigrant children, only children with a migration background are selected. We defined having a migration background as being born outside the current country of living or having parents that are born outside the current country of living. After excluding missing values on the dependent and independent variables, 5,454 immigrant students were left for the analyses.
Table 2: Descriptive statistics of the dependent and independent variables (N = 5454)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min.</th>
<th>Max.</th>
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<td>Support for democratic values</td>
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<td>0.432</td>
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<td>3.218</td>
<td>0.753</td>
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<td></td>
<td></td>
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<tr>
<td>No religion</td>
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<td>0</td>
<td>1</td>
<td></td>
</tr>
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<td>Catholic</td>
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<td>0</td>
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<td></td>
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<td>Protestant</td>
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<td>Orthodox</td>
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<tr>
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<tr>
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<td>0</td>
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</tr>
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<td>Generation</td>
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<td>Age</td>
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<td>12.42</td>
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<td>Gender</td>
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<td>Male</td>
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<td>Female</td>
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<td>Expected further education</td>
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<td>Don’t expect to complete ISCED 2</td>
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<td>ISCED 2</td>
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<td>Use of state language at home</td>
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<td>Uses state language at home</td>
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<tr>
<td>Uses other language at home</td>
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<td>Parental political interest</td>
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<tr>
<td>Not interested at all</td>
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</tr>
<tr>
<td>Not very interested</td>
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<td>0</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Quite interested</td>
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<tr>
<td>Very interested</td>
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<tr>
<td>Other family</td>
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<td>-4.085</td>
<td>3.086</td>
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<td>Country of destination</td>
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<tr>
<td>Cyprus</td>
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<td>Denmark</td>
<td>0.117</td>
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<td>Belgium (Flemish)</td>
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<td>Greece</td>
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<td>Latvia</td>
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<tr>
<td>Liechtenstein</td>
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<td>Norway</td>
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<td>0</td>
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<tr>
<td>Switzerland</td>
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<td>Region of origin</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Europe</td>
<td>0.109</td>
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<tr>
<td>Northern Europe</td>
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<tr>
<td>Southern Europe</td>
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<tr>
<td>Western Europe</td>
<td>0.123</td>
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<tr>
<td>Asia</td>
<td>0.058</td>
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<tr>
<td>Africa</td>
<td>0.010</td>
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</tr>
<tr>
<td>Latin America</td>
<td>0.010</td>
<td></td>
<td></td>
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<tr>
<td>Oceania</td>
<td>0.005</td>
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<tr>
<td>Attendance of religious services</td>
<td>1.764</td>
<td>1.395</td>
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<td>4.000</td>
</tr>
<tr>
<td>Attitudes towards the influence of religion in society</td>
<td>0.000</td>
<td>1.000</td>
<td>-2.005</td>
<td>1.824</td>
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<tr>
<td>Discussion of political and social issues</td>
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<td>1.000</td>
<td>-1.409</td>
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<td>Interest in political and social issues</td>
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<td>1.000</td>
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<td>-2.210</td>
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<td>1.000</td>
<td>-2.808</td>
<td>2.333</td>
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<tr>
<td>Civic knowledge</td>
<td>149.285</td>
<td>9.846</td>
<td>109.876</td>
<td>193.433</td>
</tr>
</tbody>
</table>
Dependent variables

The dependent variables in this paper are 1) the support for democratic values, 2) attitudes towards gender equality, and 3) attitudes toward the country of destination. They are based on questions about attitudes from the survey. Of each topic several items were chosen and used to make a Likert scale. The Cronbach’s alphas for attitudes towards democracy, gender equality and the country of destination were 0.652, 0.756 and 0.814 respectively. In Appendix A the questions used for these scales can be found.

Independent variables

We use a number of independent variables. Students were asked about their religious affiliation with the question “What is your religion?” In each country children were given several options, which always included the option ‘no religion’. The other options differed between countries, matching the religious composition of each country’s population. We created six categories: No religion, Catholicism, Protestantism, Orthodox-Christian, Islam and other religions. The category ‘Protestantism’ includes Protestants, Jehovah Witnesses, Evangelists, Lutherans and Baptists. Non-Catholic Christians from Flanders belong to this category as well. The category ‘other religions’ consists of Jewish, Buddhist, Hindu and Sikh students. In each country students that didn’t belong to any of religious groups mentioned in the response options, were placed in the category ‘other’. Dummy variables for all categories will used. Secular children will be the reference category.

Children were also asked how often they attended religious services outside their home. The response options were ‘never’, ‘less than once a year’, ‘at least once a year’, ‘at least once a month’ and ‘at least once a week’ (Brese, Jung, Mirazchiyski, Schulz & Zuehlke, 2011a). Religious service attendance is an ordinal variable, but since using dummies does not explain more variance than using an interval variable, we use attendance as an interval variable in the analysis for reasons of parsimony.²

The attitudes towards the influence of religion in society are measured by asking the children several questions about what influence they think religion should have in society. All these questions were used to create a scale. The variable was standardized, so it had a mean of 0 and a standard deviation of 1. The measurement of civic knowledge is based on 98 items that test the knowledge students possess on civic society, civic principles, civic participation and civic identities (Schulz, Ainley & Fraillon, 2011). The scores were scaled using WLE and standardized afterwards. Civic knowledge has a mean of 150 and a standard deviation of 10 in each national sample (Brese, Jung, Mirazchiyski, Schulz, Zuehlke, 2011c). The civic competences that are taken into consideration in this paper are the discussion of political and social issues, political interest, internal political efficacy and citizenship self-efficacy. All of these competences were measured in similar ways. The children were asked a set of questions about these four topics. Several of these questions were selected for each topic and used to make a Likert scale. Afterwards, these variables
were standardized, so each would have a mean of 0 and a standard deviation of 1 in the sample of this study. Control variables

The immigrant generation refers to the number of generations of a family that have lived in the country of destination. Because the children are only asked about their parents’ and their own country of birth, it is not possible to distinguish between more generations than the first and the second. A child is regarded as a first-generation immigrant if they were born in a different country than the country they currently live in. A child is a second-generation immigrant if they were born in the country they live in, but their parent(s) were not. We also control for the age of the students in years. The age of the children ranged from 12 to 17. Gender was also controlled for, using a dummy indicating whether (1) or not (0) students were girls. Respondents were asked what level of education they thought they would achieve in the future. The response options were based on the national educational system. Afterwards the response options have been recoded into the categories of the international standard classification of education (ISCED), so the levels of education can be compared across Europe. The categories based on ISCED are ‘ISCED level 5A or 6’, ‘ISCED 4 or 5B’, ‘ISCED level 3’, ‘ISCED level 2’ and ‘I do not expect to complete ISCED level 2’ (Brese, Jung, Mirazchiyski, Schulz & Zuehlke, 2011b). Since expected further education is an ordinal variable, the different categories will be added to the analyses as dummy variables. ‘I do not expect to complete ISCED level 2’ is the reference category. In order to measure the use of state language, children were asked what language they spoke at home most of the time. They could choose between the language of assessment and several other languages. What and how many languages they could choose from, depended on the country in which they lived (Brese, Jung, Mirazchiyski, Schulz, & Zuehlke, 2011a). This information was recoded into a dichotomous variable with two categories: ‘student speaks state language at home’ (0) and ‘student speaks another language at home’ (1) (Schulz, Ainley, & Fraillon, 2011). Students had to report how interested they thought their parent(s) were in political and social issues. They reported the political interest of their mother and father separately. The response options for this questions were ‘very interested’, ‘quite interested’, ‘not very interested’ and ‘not interested at all’ (Brese, Jung, Mirazchiyski, Schulz & Zuehlke, 2011a). The score for both parents was computed by taking the score of the parent that was most interested according to the student (Schulz, Ainley, & Fraillon, 2011). Dummy variables are used for each category. Children whose parents are not at all interested in political and social issues are the reference category. The family form of the students’ household is based on the question whether certain persons live with the student most or all of the time. These persons are the mother, another female guardian, the father and another male guardian (Brese, Jung, Mirazchiyski, Schulz & Zuehlke, 2011a). From the answers four family forms have been created: ‘single parent family’, ‘nuclear family’, and ‘other family’. Single parent families are families in which only one parent or guardian is present. In a nuclear family both mother and father live with the child. The category ‘other family’ consists of all family forms (Brese, Jung, Mirazchiyski, Schulz, Zuehlke, 2011c). Dummy variables of the four categories are used in the analysis, nuclear family being the reference
category. *Parental socioeconomic status* is measured by an index of children’s socioeconomic background, combining information on the highest occupational status of the parents, the highest educational level of the parents in approximate years of education and the approximate number of books at home. These three variables were standardized. Afterwards a principal component analysis with these variables was conducted for each country. The factor scores for the first principal component of these analyses were used as the final scores on children’s socioeconomic background (Schulz, Ainley & Fraillon, 2011).

**Region of origin**

Neither secular and religious immigrant children nor immigrant children from different denominations are equally divided over the regions of origin (Association of Religion Data Archives [ARDA], n.d.). Instead their religious affiliation is related to their region of origin. Yet, macro-characteristics of the region or country of origin are related to civic attitudes and behaviour as well. For instance, the national religious context is related to volunteering, independent of one’s individual religiosity (Ruiter & de Graaf, 2006). Moreover, the type of regime immigrants used to live in, is associated with their support for democracy (Bilodeau, McAllister & Kanji, 2010). These macro-characteristics can both directly and indirectly be related to immigrant children’s attitudes. If they migrated themselves, the national context of their country of origin can be directly related to their civic attitude. However, their civic attitudes can also be related to characteristics of their country of origin indirectly, since the attitudes their parents transmit are associated with the national context in the country of origin. In other words, country of origin is related to both religious affiliation and civic attitudes, which is why it is important to control the relationship between religion and civic attitudes for country of origin.

We used information on the countries of birth of respondents and their parents to determine origin regions. Based on a division made by the UN seven categories were created: Africa, Latin America, Asia, Eastern Europe, Southern Europe, Western Europe and Oceania (United Nations Statistics Division, 2013). We also coded a separate category ‘region of origin unknown’. This is category is heterogeneous because the response options different between countries. We use dummy variables, with Western Europe as the reference category.
Figure 1: Boxplots of the support for democratic values for each religious group

Figure 2: Boxplots of the attitudes towards gender equality for each religious group

Figure 3: Boxplots of the attitudes towards the democratic destination country for each religious group

Support for democratic values

Attitudes towards gender equality

Attitudes towards the democratic destination country
Analyses and results

Descriptive results

Figures 1 to 3 show boxplots of each dependent variable for the six religious groups. Three general conclusion seem merited from this description. First, on all three civic attitudes, intra-denominational differences are visible. Immigrant children who adhere to Islam and other Eastern religions seem slightly less supportive of democratic values than non-religious or Christian immigrant children. They are also on average less supportive of gender equality, although here, immigrant children who adhere to orthodox Christianity appear least supportive. Orthodox immigrant children also seem to hold least favourable views toward their destination country. Second, it is important to note that differences are rather small. Third, the figures also show the degree of dispersion in the three dependent variables. When comparing figure 3 to figure 1 and 2, it is clear that the variation of attitudes towards the democratic destination country is larger than the variation of support for democratic values and attitudes towards gender equality. In other words, there are more different opinions between immigrant children of the same religious group about the democratic destination country than about democracy or gender equality.

Explanatory models and analytical strategy

For the estimation of our models we use SPSS, version 23. We estimate OLS regression models, in which we control for clustering within countries of origin and destination by adding dummies to the regression.\(^6\) The following formula was used for the estimation of our full models:

\[
\hat{Y} = \beta_0 + X\beta_1 + Y\beta_2 + Z\beta_3 + A\beta_4 + B\beta_5 + C\beta_6 + D\beta_7 + E\beta_8 + \epsilon
\]

In which \(X\) is a vector for religion, \(Y\) is a vector for immigrant generation, \(Z\) is a vector for socioeconomic characteristics, \(A\) is a vector for region of origin and country of destination, \(B\) is a vector for religious service attendance, \(C\) is a vector for institutional trust, \(D\) is a vector for attitudes towards the influence of religion in society and \(E\) is a vector for civic knowledge and competences.

Regression results

Table 3 shows the relationships between religion and the support for democratic values, the attitudes towards gender equality and the democratic destination country. In Model 1, only religion and immigrant generation are included as predictors of civic attitudes. In Panel A the results for support for democratic values are presented. Here, it is shown that that immigrant children adhering to Islam are less supportive of democratic values than secular immigrant children. Christian and secular immigrant children do not differ in their support for democracy. The results of Model 1 with regard to attitudes towards gender equality are shown in Panel B. These results suggest that immigrant children that are
Orthodox Christian or Islam support gender equality less than non-religious immigrant children and that Protestant migrant children support gender equality more. Immigrant children belonging to Catholicism don’t hold different opinions on gender equality than secular immigrant children. The results for attitudes towards the democratic destination country can be found in Panel C. Immigrant children adhering to Catholicism, Protestantism or Islam are more positive about the democratic country they live in than secular immigrant children. Conversely, Orthodox Christian immigrant children think less positively about the democratic destination country than secular immigrant children.

In Models 2 and 3 we add controls. The relationship between religion and the three civic attitudes is controlled for socioeconomic characteristics in Model 2. In general, this relationship decreases in size when compared to Model 1, meaning that the religious differences in civic attitudes can partly be interpreted as socioeconomic differences. The relationship between being Protestant and attitudes toward gender equality has even become insignificant. However, when looking the association between being an Orthodox Christian and attitudes towards gender equality in Panel B, it can be seen that the association has increased in size when Model 1 is compared to Model 2. The same happens to the relationship between being an Orthodox Christian and attitudes toward the democratic destination country in Panel C. This indicates that socioeconomic characteristics suppress the relation between being Orthodox Christian and the aforementioned civic attitudes.

In Model 3, the association between religion and civic attitudes is also controlled for region of origin and country of destination. Compared to Model 2, some relations between religion and civic attitudes have grown stronger, others have grown weaker. As can be seen in Model 3 of Panel B, the relationship between attitudes towards gender equality and Protestantism and Islam has grown in size. The relationship between attitudes towards gender equality and being Protestant has even become significant. All other relations decrease in size in Model 3 when compared to Model 2 and some even become insignificant. The latter is the case for the relationship between being Islamic and support for democratic values, as is shown in Panel A. It also holds for the association between attitudes towards the democratic country of destination and Christian Orthodoxy, which is shown in Panel C. The full models in which the parameters of unknown religion, immigrant generation, the socioeconomic characteristics, region of origin, and country of destination are included can be found in Appendix B.

The first hypothesis stated that religious immigrant children would have less positive civic attitudes than their secular counterparts. After controlling the relationship between religion and civic attitudes for immigrant generation, socioeconomic characteristics, region of origin and country of destination in Model 3, this is true for support for attitudes towards gender equality, as can be seen in Panel B. However, the opposite is found for attitudes towards the democratic destination. As is shown in Panel C, religious immigrant children are more positive towards the democratic destination country than nonreligious immigrant children. Our second hypothesis stated that there would be differences in civic
attitudes between immigrant children of various denominations. Judging from the results in Model 3 these differences exist. Further analyses in which various religions were the reference category, show that after controlling for immigrant generation, socioeconomic characteristics, region of origin and country of destination, the civic attitudes of immigrant children of various denominations are significantly different.\textsuperscript{7}

In Model 4, religious service attendance was added to the analyses. As can be seen in Panel A and B, it is irrelevant for one’s support for democratic values whether one attends religious services or not. This is not the case for attitudes towards the democratic destination country (Panel C). Immigrant children that attend religious services more often think more positively about their destination country. After religious service attendance was included in the analyses in Model 4, the relationship between religion and support for gender equality has increased in strength, as is shown in Panel B. Yet, it must be noted that these increases are quite small. In Model 4 in Panel C the opposite happens. The relationship between being Catholic or Protestant and attitudes towards the democratic destination country has grown weaker. The same holds for Islamic migrant children and this relationship has become insignificant in Model 4. In our third hypothesis we expected religious service attendance to partly interpret the relationship between civic attitudes and religion. Yet, this can only be observed for attitudes towards the democratic destination country.

Our fourth hypothesis stated that the religious differences between immigrant children would decrease if controlled for the attitudes towards the influence of religion in society. As show in Model 5, immigrant children that think religion should have a bigger influence on society are less positive about gender equality (Panel B) but more positive about their democratic destination country (Panel C). After adding attitudes towards the influence of religion in society to the analyses the positive association between religious service attendance and support for gender equality becomes significant. Including attitudes towards the influence of religion in society in Model 5 decreases almost every relationship between religion and civic attitudes. The relationship between Islam and Orthodox Christianity on the one hand and gender equality (Panel B) on the other is partly explained. The same holds for the association between Catholicism and Protestantism and support for the democratic destination country (Panel C). All the aforementioned effects become insignificant. Conversely, the association between being Protestant and attitudes towards gender equality increases in strength and is now significant (Panel B).

In Model 6, civic competences and knowledge are included in the analyses. Their relation with civic attitudes is complex. It appears that immigrant children who discuss political and social issues more with family and friends are more supportive of equality between men and women, but less supportive of the democratic destination country. Yet, such discussions are irrelevant for one’s attitudes towards democratic values. Second, immigrant children with more interest in politics have more positive attitudes towards the democratic destination country. Political interest is unrelated to one’s support for democratic values and gender equality. Thirdly, the higher the sense of internal political
efficacy immigrant children have, the less they are in favour of gender equality. Internal political efficacy is not associated with support for democratic values and attitudes towards the democratic destination country. Fourth, immigrant children that have more citizenship self-efficacy are more supportive of democratic values and have more positive attitudes towards the democratic destination country. Citizenship self-efficacy is unrelated to attitudes towards gender equality. Finally, immigrant children that have more civic knowledge are more supportive of democratic values and gender equality. However, civic knowledge is irrelevant for immigrant children’s attitude towards their democratic destination country. The inclusion of civic competences and knowledge in the analyses increases the size of the relationship between being Protestant and support for democracy in Model 6 when compared to Model 5. Yet, the association between being Protestant and attitudes towards gender equality becomes less strong.

Table 3: Regressions of religion on support for democratic values, attitudes towards gender equality and attitudes towards the democratic destination country (standardised beta coefficients) (N=5454)

<table>
<thead>
<tr>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Panel A Support for democratic values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No religion (ref.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>0.003</td>
<td>0.004</td>
<td>-0.018</td>
<td>-0.022</td>
<td>-0.020</td>
</tr>
<tr>
<td>Protestant</td>
<td>0.010</td>
<td>0.006</td>
<td>-0.017</td>
<td>-0.020</td>
<td>-0.018</td>
</tr>
<tr>
<td>Orthodox</td>
<td>0.000</td>
<td>0.000</td>
<td>0.032</td>
<td>0.029</td>
<td>0.033</td>
</tr>
<tr>
<td>Islam</td>
<td>-0.048 **</td>
<td>-0.042 *</td>
<td>-0.024</td>
<td>-0.028</td>
<td>-0.022</td>
</tr>
<tr>
<td>Other</td>
<td>-0.019</td>
<td>-0.013</td>
<td>-0.018</td>
<td>-0.019</td>
<td>-0.018</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migrant generation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Socioeconomic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Origin &amp; destination</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Church attendance</td>
<td>0.010</td>
<td>0.015</td>
<td>-0.021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Att. influence religion</td>
<td>-0.015</td>
<td></td>
<td></td>
<td>0.033 *</td>
<td></td>
</tr>
<tr>
<td>Political discussion</td>
<td></td>
<td></td>
<td></td>
<td>-0.010</td>
<td></td>
</tr>
<tr>
<td>Political interest</td>
<td></td>
<td></td>
<td></td>
<td>0.010</td>
<td></td>
</tr>
<tr>
<td>Int. political efficacy</td>
<td></td>
<td></td>
<td></td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Citizensh. self-efficacy</td>
<td>0.132 ***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civic knowledge</td>
<td>0.003</td>
<td>0.042</td>
<td>0.061</td>
<td>0.061</td>
<td>0.061</td>
</tr>
<tr>
<td>R-Square</td>
<td>0.038</td>
<td>0.200</td>
<td>0.238</td>
<td>0.238</td>
<td>0.255</td>
</tr>
<tr>
<td><strong>Panel B Attitudes towards gender equality</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No religion (ref.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>-0.016</td>
<td>-0.006</td>
<td>-0.023</td>
<td>-0.028</td>
<td>-0.028</td>
</tr>
<tr>
<td>Protestant</td>
<td>0.036</td>
<td>0.025</td>
<td>0.030</td>
<td>0.026</td>
<td>0.046 **</td>
</tr>
<tr>
<td>Orthodox</td>
<td>-0.187 ***</td>
<td>-0.213 ***</td>
<td>-0.066 **</td>
<td>-0.070 **</td>
<td>-0.023</td>
</tr>
<tr>
<td>Islam</td>
<td>-0.101 ***</td>
<td>-0.054 **</td>
<td>-0.076 ***</td>
<td>-0.081 ***</td>
<td>-0.017</td>
</tr>
<tr>
<td>Other</td>
<td>-0.017</td>
<td>-0.009</td>
<td>-0.024</td>
<td>-0.025</td>
<td>-0.016</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Migrant generation</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Socioeconomic</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Origin &amp; destination</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Church attendance</td>
<td>0.011</td>
<td>0.067 ***</td>
<td>0.043 **</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Att. influence religion</td>
<td>-0.169 ***</td>
<td>-0.115 ***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political discussion</td>
<td>0.040 **</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political interest</td>
<td>0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Int. political efficacy</td>
<td>-0.077 ***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citizensh. self-efficacy</td>
<td>0.004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civic knowledge</td>
<td>0.038</td>
<td>0.200</td>
<td>0.238</td>
<td>0.238</td>
<td>0.255</td>
</tr>
<tr>
<td>R-Square</td>
<td>0.038</td>
<td>0.200</td>
<td>0.238</td>
<td>0.238</td>
<td>0.255</td>
</tr>
<tr>
<td><strong>Panel C attitudes towards the democratic destination country</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No religion (ref.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>0.131 ***</td>
<td>0.121 ***</td>
<td>0.077 ***</td>
<td>0.053 *</td>
<td>0.035</td>
</tr>
</tbody>
</table>
### Discussion and conclusion

In this paper we studied the relationship between immigrant children's religiosity and their civic attitudes. Earlier research shows that there is a relationship between religiosity and both civic behaviour and civic attitudes, but this relationship has barely been studied for immigrants. In addition, there has barely been any research that takes denominational differences into account as well. Finally we tried to interpret the association between religiosity and civic attitudes by testing the role of religious attendance, attitudes towards the influence of religion in society, and civic competences and knowledge.

While we provide a sound quantitative analysis of possible explanations for differences in immigrant children's civic attitudes, our research could be improved. One improvement would be to use better information about origin countries. First, there was a rather large group of children of whom the religion was unknown. These children were included in the analyses as a separate category, but it is possible that they actually belong in another category that wasn’t an option in their country of residence. In addition, we used region of origin instead of country due to a lack of data. Therefore, we were not able to control for country of origin as accurately as we wanted to. These problems could be solved in the future by using data in which the answers options didn’t differ between countries or in which the ‘other’ category was omitted completely. It is essential that subsequent waves of the ICCS data make an effort to gain better information about the countries of origin of pupils and their parents.

This study demonstrates that there are differences between religious and nonreligious immigrant children and between immigrant children from different denominations. In the case of the support for gender equality, there are clear differences between Eastern religions and Western Christian religions. In case of the attitudes towards the democratic
destination country such contrast doesn’t exist. Here, there are differences between Orthodox Christian and Catholic, Protestant and Islamic immigrant children.

In addition, this study shows that the relationship between religiosity and support for democratic values and gender equality can largely be explained by religious attitudes and behaviors, such as church attendance and attitudes towards the influence that religion should have in society. Protestant children are more in favour of gender equality because they attend religious services more often. For Islamic and Orthodox Christian children, on the other hand, low support for gender equality goes hand in hand with wishing that religion should have a greater impact on society. Furthermore, Catholic and Protestant immigrant children as well as Islamic immigrant children hold more positive attitudes towards their destination countries. Yet, Islamic children do so because they attend religious services more often, whereas Catholic and Protestant children do so because they want religion to have a larger role in society.

References


Appendix A

Table A.1: Questions used to create the dependent variables (support for democratic values, attitudes towards gender equality and attitudes towards the country of destination)

<table>
<thead>
<tr>
<th>Support for democratic values</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>There are different views about what a society should be like. We are interested in your views on this. How much do you agree or disagree with the following statements?</td>
<td>0.652</td>
</tr>
<tr>
<td>ISP20A Everyone should always have the right to express their opinions freely</td>
<td></td>
</tr>
<tr>
<td>ISP20E All people should have their social and political rights respected</td>
<td></td>
</tr>
<tr>
<td>ISP20F People should always be free to criticise the government publicly</td>
<td></td>
</tr>
<tr>
<td>ISP20H All citizens should have the right to elect their leaders freely</td>
<td></td>
</tr>
<tr>
<td>ISP20I People should be able to protest if they believe a law is unfair</td>
<td></td>
</tr>
<tr>
<td>Response options: strongly agree (1), agree (2), disagree (3), strongly disagree (4)</td>
<td></td>
</tr>
</tbody>
</table>

| Attitudes towards gender equality | 0.756 |
| There are different views about the roles of women and men in society. How much do you agree or disagree with the following statements? | |
| IS2P24C Women should stay out of politics | | |
| IS2P24D When there are not many jobs available, men should have more right to a job than women | | |
| IS2P24F Men are better qualified to be political leaders than women | | |
| Response options: strongly agree (1), agree (2), disagree (3), strongly disagree (4) | | |

| Attitudes towards own country | 0.814 |
| How much do you agree or disagree with the following statements about? | |
| ISP28A The <flag of the country of test> is important to me | | |
| ISP28B The political system in <country of test> works well | | |
| ISP28C I have great respect for <country of test> | | |
| ISP28D In <country of test> we should be proud of what we have achieved | | |
| ISP28F I am proud to live in <country of test> | | |
| ISP28G <Country of test> shows a lot of respect for the environment | | |
| ISP28H Generally speaking, <country of test> is a better country to live in than most other countries | | |
| Response options: strongly agree (1), agree (2), disagree (3), strongly disagree (4) | | |

Appendix B: Full regression models

Table C.1: Regressions of religion on support for democratic values (standardised beta coefficients) (N=5454)

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
<th>Model 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion (ref. = no religion)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>0.003</td>
<td>0.004</td>
<td>-0.018</td>
<td>-0.022</td>
<td>-0.020</td>
<td>-0.019</td>
</tr>
<tr>
<td>Protestant</td>
<td>0.010</td>
<td>0.006</td>
<td>-0.017</td>
<td>-0.020</td>
<td>-0.018</td>
<td>-0.033</td>
</tr>
<tr>
<td>Orthodox</td>
<td>0.009</td>
<td>0.000</td>
<td>0.032</td>
<td>0.029</td>
<td>0.033</td>
<td>0.018</td>
</tr>
<tr>
<td>Islam</td>
<td>-0.048 **</td>
<td>-0.042 *</td>
<td>-0.024</td>
<td>-0.028</td>
<td>-0.022</td>
<td>-0.013</td>
</tr>
<tr>
<td>Other</td>
<td>-0.019</td>
<td>-0.013</td>
<td>-0.018</td>
<td>-0.019</td>
<td>-0.018</td>
<td>-0.008</td>
</tr>
<tr>
<td>Religion unknown</td>
<td>-0.006</td>
<td>-0.003</td>
<td>-0.014</td>
<td>-0.016</td>
<td>-0.014</td>
<td>-0.006</td>
</tr>
<tr>
<td>First generation immigrant</td>
<td>-0.012</td>
<td>-0.014</td>
<td>-0.014</td>
<td>-0.014</td>
<td>-0.014</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
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<td>0.010</td>
<td>0.010</td>
<td>0.011</td>
<td>0.017</td>
<td></td>
</tr>
<tr>
<td>Girl</td>
<td>0.016</td>
<td>0.020</td>
<td>0.019</td>
<td>0.019</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>Expected further education (ref. = don’t expect to complete ISCED 2)</td>
<td>Mode 11</td>
<td>Mode 12</td>
<td>Mode 13</td>
<td>Mode 14</td>
<td>Mode 15</td>
<td>Mode 16</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
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<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>ISCED 2</td>
<td>0.060</td>
<td>0.052</td>
<td>0.052</td>
<td>0.053</td>
<td>0.034</td>
<td></td>
</tr>
<tr>
<td>ISCED 3</td>
<td>0.188</td>
<td>***</td>
<td>0.182</td>
<td>***</td>
<td>0.181</td>
<td>***</td>
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<tr>
<td>ISCED 4 or 5B</td>
<td>0.162</td>
<td>***</td>
<td>0.190</td>
<td>***</td>
<td>0.190</td>
<td>***</td>
</tr>
<tr>
<td>ISCED 5A or 6</td>
<td>0.292</td>
<td>***</td>
<td>0.298</td>
<td>***</td>
<td>0.297</td>
<td>***</td>
</tr>
<tr>
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Source: ICCS 2009

Table C.2: Regressions of religion on attitudes towards gender equality (standardised beta coefficients) (N=5454)
| Not speaking the state language at home | -0.046 *** | -0.045 *** | -0.046 *** | -0.033 ** | -0.021 |
| Parental political interest (ref. = not interested at all) | Not very interested | 0.048 | 0.036 | 0.035 | 0.045 | 0.026 |
| | Quite interested | 0.061 | 0.051 | 0.050 | 0.064 | 0.039 |
| | Very interested | 0.065 | 0.066 | 0.065 | 0.078 * | 0.059 |
| Family form (ref. = nuclear family) | Single parent family | -0.005 | 0.006 | 0.006 | 0.003 | 0.001 |
| | Other family | -0.006 | -0.007 | -0.007 | -0.010 | -0.008 |
| | Parental socioeconomic status | 0.079 *** | 0.077 *** | 0.077 *** | 0.059 *** | 0.024 |
| Country of destination (ref. = the Netherlands) | Austria | -0.002 *** | -0.002 *** | -0.006 ** | -0.053 * | * |
| | Cyprus | -0.158 *** | -0.159 *** | -0.131 *** | -0.112 *** | ** |
| | Denmark | 0.018 | 0.018 | 0.022 | 0.048 * | * |
| | Belgium (Flemish) | -0.055 ** | -0.055 ** | -0.048 * | -0.022 |
| | Greece | -0.146 *** | -0.146 *** | -0.126 *** | -0.094 *** | ** |
| | Latvia | -0.214 *** | -0.214 *** | -0.204 *** | -0.180 *** | *** |
| | Liechtenstein | -0.023 | -0.023 | -0.027 | -0.017 | ** |
| | Norway | -0.064 *** | -0.064 *** | -0.052 * | -0.030 |
| | Poland | -0.076 *** | -0.077 *** | -0.070 *** | -0.066 *** | ** |
| | Switzerland | -0.068 * | -0.069 * | -0.070 * | -0.043 |
| Region of origin (ref. = Western Europe) | Eastern Europe | -0.040 | -0.039 | -0.036 | -0.021 |
| | Northern Europe | -0.008 | -0.008 | -0.008 | -0.003 |
| | Southern Europe | -0.012 | -0.012 | -0.003 | 0.013 |
| | Asia | -0.038 | -0.039 | -0.036 * | -0.018 |
| | Africa | -0.027 | -0.026 | -0.021 | -0.014 |
| | Latin America | 0.003 | 0.003 | 0.009 | 0.019 |
| | Oceania | -0.018 | -0.019 | -0.019 | -0.018 |
| | Region of origin unknown | -0.015 | -0.015 | -0.010 | 0.008 |
| Attendance of religious services | 0.011 | 0.067 *** | 0.043 ** |
| Attitudes towards the influence of religion in society | -0.169 *** | -0.115 *** |
| Discussion of political and social issues | 0.040 ** |
| Interest in political and social issues | 0.001 |
| Internal political efficacy | -0.077 *** |
| Citizenship self-efficacy | 0.004 |
| Civic knowledge | 0.247 *** |
| R-Square | 0.038 | 0.200 | 0.238 | 0.238 | 0.255 | 0.297 |

Source: ICCS 2009

Table C.3: Regressions of religion on attitudes towards the democratic destination country (standardised beta coefficients) (N=5454)
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Source: ICCS 2009
Does Private Islamic Schooling Promote Terrorism? An Analysis of the Educational Background of Successful American Homegrown Terrorists

M. Danish Shakeel & Patrick J. Wolf

Abstract

Some commentators argue that private religious schools are less likely to inculcate the attributes of good citizenship than traditional public schools (Gutmann, 1999), specifically proposing that private Islamic schools are relatively more likely to produce individuals sympathetic to terrorism (Stotsky, 2011). This study offers a preliminary examination of the question by studying the educational backgrounds of Western educated terrorists. While data are limited, in accord with prior work (Bergen & Pandey, 2005) findings indicate the vast majority of both Islamic and reactionary terrorists attended traditional public schools and had no religious education; hence findings suggest that early religious training and identification may actually encourage prosocial behavior.

Keywords: terrorism, public schools, private schools, school choice, Islam, madrasa, Muslim, jihadist, right wing, homegrown terrorists

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9 Department of Education Reform, University of Arkansas, Arkansas, (USA), Email adress: pwolf@uark.edu, ORCID: 0000-0002-5668-2309

With regards to three dimensions (reflection, skills, and attitudes) pupils at Islamic schools score considerably higher than pupils at comparable schools, and still higher than pupils at the average school. Only with regard to knowledge competence do pupils at Islamic schools score nearly the same as pupils at comparable schools, but significantly lower than pupils at the average school. These findings directly challenge the assumption that pupils at Islamic schools are less likely to cultivate the relevant civic virtues for Dutch society at large. Jaap Dronkers, 2016, pp. 14-15.

The late, eminent sociologist Jaap Dronkers possessed an impressive set of academic skills and virtues (Wolf, 2016). He delved, courageously, into controversial topics with an open mind and an incisive set of analytic tools. The fruits of his scholarship included his pioneering study of the civic skills and attitudes of students in private Islamic schools in The Netherlands, published just before his untimely death. Contrary to popular belief, Dronkers concluded, Dutch Islamic schools appeared to be doing a good job of preparing students to be law-abiding, democratic citizens (Dronkers, 2016). In this article, we examine whether Dronkers’ findings regarding Dutch private schools and civic values appear to apply to the U.S. context and the most un-civic of behaviors: terrorism.

Despite the considerable media and law enforcement attention it draws, terrorism in the West is rare, and typically conducted by individuals or small groups, limiting empirical analyses (Biglan, 2015; Berman et al., 2015). The extant empirical work on terrorism questions conventional wisdom about the phenomena. Pape’s profiles of modern suicide bombers as of 2003 indicate that religion was a primary motivation in only 5% of cases. Rather “suicide terrorism is mainly a response to foreign occupation rather than the product of Islamic fundamentalism” (Pape, 2005, p. 237). Terrorism has since evolved, with an incremental rise of Western born and raised individuals joining foreign battlefields or attempting to commit acts of terror in their homelands. Case studies employ political environment and socioeconomic variables to explain these individual decisions to participate in acts of terror. Possible causes of contemporary terrorism include religious indoctrination (Hindery, 2003; Schbley, 2003) and social and psychological alienation (Lyons-Padilla et al., 2015; Stern, 2016). While studies try to examine potential causal variables that may explain radicalization, the individual, social and political variables involved are endogenous to other key variables such as religion and culture.

Lyons-Padilla et al. (2015) finds that cultural homelessness and attendant alienation among American Muslim immigrants is associated with increased support for fundamentalist groups and extremist causes. Bhatt and Silber (2007) proposes four phases of radicalization for the Western jihadist terrorist: 1) pre-radicalization, 2) self-identification, 3) indoctrination and 4) jihadization. Religious education may play a role

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10 We thank Charles Leslie Glenn, Jr., of Boston University and Robert Maranto and Dirk C. van Raemdonck of the University of Arkansas for comments on earlier drafts. All remaining flaws are ours. Corresponding author is M. Danish Shakeel, mdshakee@uark.edu.
in these phases of radicalization. Often, private Islamic schools are accused of producing individuals who commit acts of terror (Stern, 2000), but Bergen & Pandey (2005) point out that Western jihadists largely do not attend Islamic schools. They note, “while madrassas may breed fundamentalists who have learned to recite the Koran in Arabic by rote, such schools do not teach the technical or linguistic skills necessary to be an effective terrorist.” (Bergen & Pandey, 2005, p. A23) Out of the 75 profiles of terrorists who attacked Western targets, only nine had attended madrasas. Their study did not parse out the data between homegrown vs. foreign terrorists and by schooling type, probably due to small sample size.

Few Western terrorists majored in religion during their religious studies (Gambetta, & Hertog, 2016). Classic work by Hoffer (1951) shows how radicals differ from the rest of society. Since many commentators see religious schooling as a form of indoctrination (Dawkins, 2006; Harris, 2011; Americans United, 2011), it is important to examine possible relationships between religious schooling and terrorism.

The purpose of this study is to offer a preliminary exploration of whether religious schooling in general and Islamic schooling in particular is associated with participation in terrorism. American government and international aid agencies have funded programs to strengthen the educational effectiveness of public schools, but not religious schools, in majority-Muslim nations since September 11, 2001. Efforts to reduce terrorism by replacing religious schools with public schools may be counter-productive. Experimental and quasi-experimental studies in the United States and Europe indicate that private school choice interventions tend to produce positive outcomes for civic values (Wolf, 2007; Forster, 2016), or at least do no harm in that area (Dronkers, 2004; Carlson, Chingos & Campbell, 2017). Thus, carefully designed school choice interventions may decrease terrorism by reducing the numbers of young recruits who attempt to commit violent acts.

To explore the possibility that religious schooling might not be causing, and in fact might be hindering, terrorism, this article analyzes the schooling of native born Americans who succeeded in committing an act of terror inside the United States. We first outline the role of quality instruction grounded in an authentic understanding of Islamic tradition, culture, and values in discouraging terrorism, as well as the role of independent religious schools in delivering such instruction. The paper argues that decentralized and market based schooling better facilitates tolerance in comparison to centralized and government controlled schooling (Berner, 2017; Coulson, 1999; Friedman, 2002; Glenn, De Groof, & Candal, 2012). We suggest that religious extremism and recently Islamic extremism is a byproduct of the lack of access to quality religious education, government hindrance of school choice and the lack of pluralism in public schooling and not necessarily caused by religious schooling. We use the coding of historical cases and summary statistics to support our claims. This preliminary analysis suggests that school choice interventions may, over the long term, reduce the incidence of terrorism in Western societies.
Contextual history and theory of Islamic schooling and organization

Five framing considerations are vital to our exploratory study. First, Islam has a long and storied educational tradition that mainly has been privately operated and decentralized. Second, the major branches of Islam, Sunni and Shia, are distinct in ways that inform our consideration of private school choice and terrorism. Third, traditionalism and fundamentalism is a second distinction within Islam that is largely independent of the Sunni-Shia divide. Fourth, a lack of exposure to high-quality religious instruction appears to be contributing to the modern terrorist activity of some Muslims. Fifth, high-quality Islamic religious instruction in the West is likely to be fostering by a system of private Islamic schools financially supported and partially overseen by government.

Islamic schooling tradition

Up to the eleventh century, Islamic schooling was primarily self-funded and philanthropic. Schooling in mosques and in the madrasas took place free of government intervention. Egger (2004, p. 220) notes “[t]he madrasa never displaced the mosque as an educational institution. In fact, Muslims were never precise in distinguishing between the two, because education and worship took place in both.” This period is often remembered as the golden age of Islam due to its high scholarly accomplishment and education attainment. Increased state intervention in schooling starting in the eleventh century occurred contemporaneously with a decline in Islamic scholarship and reduced tolerance of minorities, perhaps reflecting regime goals superseding religious goals. Decentralization and a market orientation were the key attributes of Islamic schooling up to that time (Coulson, 1999; Durrant, 1950, p. 94, 304).

The Sunni-Shia distinction

Religious tradition is often complicated. Much of Sunni Islam is decentralized whereas Shia Islam is essentially centralized. This distinction has important implications. The violent extremists of Sunni Islam become self-empowered and interpret Islam in ways that justify their values and actions (Gambetta, & Hertog, 2016). Sunni extremists practice violence horizontally while Shia extremists do so vertically, meaning that the former harm fellow religious comrades and declare them as apostates while the latter target ‘perceived opponents.’ By every count Al-Qaeda, Taliban, ISIS and other Sunni terrorist organizations have killed far more Sunni Muslims than other groups have done. On the other hand, Shia Militias seldom attack their co-religionists, largely because Shia central authorities (Ayatollahs) must authorize such violent acts.

Islamic traditionalism versus fundamentalism

The divide between Islamic traditionalism and fundamentalism is central to the schooling and terrorism story. Traditionalism involves following the four jurisprudential schools of thought in Sunni Islam of Hanafi, Shafi’i, Hanbali and Maliki. Fundamentalism rejects these established theological practices and often goes against the theological consensus of the
traditionalist interpretations, called the *ijma*. Traditionalists are less likely than fundamentalists to get involved in terrorism as traditionalists are influenced by historic institutions, scholarly consensus and a variation in interpretation of religious texts, all of which possess market attributes.

Traditionalists view family and civic values as highly salient, while these commitments tend to be weaker for fundamentalists. Literal interpretation of the text of *The Quran* is central to the fundamentalist doctrines of *Salafism* and *Wahhabism* (Hill, Knitter, & Madges, 1997). Fundamentalism lacks mass appeal, but in societies where socio-economic and political vacuums exist, fundamentalism has gained legitimacy. Almost all major Sunni terrorist organizations identify their ideology as fundamentalist (*Salafism* or *Wahhabism*). In the theological sense, Sunni fundamentalism confronts the theological consensus of traditionalist Muslim scholars and jurists. The majority of Islamic fundamentalists do not practice violence yet the correlation between fundamentalism and violence is strong. We now focus on the possibility that quality Islamic instruction could moderate the trail to terror for Sunni fundamentalists that form the majority.

*Quality instruction grounded in an authentic understanding of Islamic tradition, culture, and values*

Growing numbers of new converts to Islam have suddenly joined jihad. Ten to 25 percent of terrorists are Western converts to Islam, including approximately 30 percent of American jihadists, a remarkably high percentage given their very small numbers (Roy, 2008; *New America*, 2017). While most life-long Muslims have received a substantial amount of religious instruction in their mosques and schools, converts to Islam lack depth to their Islamic training due to a general lack of exposure to quality Islamic instruction.

This article defines quality Islamic instruction as grounded in an authentic understanding of Islamic tradition, culture, and values. High quality instruction, regardless of topic, promotes cognitive outcomes like educational achievement and attainment and also non-cognitive outcomes like grit and perseverance. For example, Dutch Islamic schools outperform comparison schools in improving student non-cognitive skills on three dimensions: reflections, skills, and civic attitudes and have a positive effect on student cognitive outcomes after controlling for student socio-economic background (Dronkers, 2016).

A lack of quality religious instruction grounded in an authentic understanding of Islamic tradition, culture, and values appears to contribute to terrorist activity. Most Western terror recruiters and the individuals who commit terror are less likely to know classical Arabic or be trained in traditional Islamic sciences¹¹ and thus lack the authority to issue a

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¹¹ Traditional Islamic sciences include Islamic jurisprudence and its methodology primarily based on the Quran and the traditions of the prophet of Islam. Islamic sciences differ from western sciences as the former are laid around revealed Islamic texts and spirituality. Worship forms the core of the former while for the latter acquiring material knowledge is the main motivation.
fatwa$^{12}$ (Kareem, 2014; Oakford, 2014). In lieu of quality Islamic instruction, the typical Islamic consumer may not be able to distinguish between the opportunity cost of choosing the religious signal from a traditionalist who opposes terrorism over that of a fundamentalist who condones or encourages it.

Many Muslim youth in the West lack a religious identity, as they neither attend mosque nor vigorously nurture a strong religious identity (Haddad & Lummis, 1987; Smith, 2000). Qualitative work in Islamic schools shows that children draw upon Islamic education for their identity and to give their life meaning (Driessen, & Valkenberg, 2000; Hussain, & Read, 2015; Mohme, 2017; Smith, 2000; Zine, 2006). Lack of access to quality & overtly religious schooling is thus not a boon but a bane for promoting civic values (Berner, 2017). The traditional public schools are often large, bureaucratic, and lack religious and other values. Hence, they leave young people hungry for meaning (Berner, 2017; Chubb, & Moe, 1990; Powell, Farrar, & Cohen, 1985).

Western Islam seeks to be in accord with modernity. Almost all Western mosques welcome Muslims of both genders. The challenge for Islam, however, is that new converts to the faith and the current generation of Muslims coming of age in the West often lack access to quality instruction to communicate the theological depth, diversity, traditions, and values of Islam. The social and purposive needs of Muslims, especially if they are young or converts to the religion, may be better addressed through private schools of choice, as market oriented organizations are better at dispensing incentives to individuals to prompt them to contribute activity to collective enterprises (Clark and Wilson, 1961). Under school choice systems, consumers are able to maximize their religious, spiritual and cultural utility by their choice of a school for their child. Such programs operate under the purview of the legal and democratic process (Wolf & Macedo, 2004; Glenn, De Groof, & Candal, 2012; Mohme, 2017).

Role of independent religious schools

Limited local access to quality religious instruction creates a bad market for the potential Islamic consumer. The problem concerning religious extremism and Islam, we contend, can be thought of as an example of market failure. The market for Islamic religious instruction in most parts of the world arguably is suffering from a lack of four key market components: (1) quality options, (2) variation in theological instruction, (3) operational autonomy from the state, and (4) competition among religious institutions based on observable outcomes. Increases in the delivery of education specifically through government schooling reduces the variance in Islamic theological instruction by reducing the size of the market for religious schools. State intervention in religious institutions also gives rise to special interest groups, which, if fundamentalist, become a source for the government to stay in power. Consequently, fundamentalism gains influence in the

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$^{12}$ Literal meaning is Islamic opinion (it takes the form of a verdict when issued by a jurist). In Western democracies, a fatwa is often a non-binding Islamic verdict issued by an influential religious authority.
absence of local quality options, as we have seen recently in Iran, Saudi Arabia and Pakistan.

Religious education is handled, broadly, in three different ways across countries (Wolf & Macedo, 2004; Glenn, De Groof & Candal, 2012). In most nation-states, religious schools operate entirely in the private sector, with no subsidies and little involvement from government. Some countries, from the Middle East to Great Britain, provide faith based religious instruction in government-run public schools. For political reasons such as regime maintenance, these governments influence the instruction in religious schools. Finally, many Western countries permit private religious schools to receive government subsidies to support the education of students that choose to attend such schools (Dronkers & Robert, 2008). Even though the government regulation of religious schools under private school choice systems ranges from minimal to only moderate at most (Glenn, De Groof, & Candal, 2012), a substantial amount of research shows that private school choice contributes to civic values and tolerance, and no evidence indicates that civic attitudes and social cohesion degrades due to school choice (Greene, 1998; Dronkers, 2004; Wolf, 2008; Shafiq & Myers, 2014; Carlson, Chingos, &Campbell, 2017).

Religious schools might be more apt to promote civic values as they cater to the spiritual development of the soul and encourage stronger family ties. Wolf (2008, p. 487) says “[t]his seems to be the case particularly among ethnic minorities (such as Latinos) in places with great ethnic diversity (such as New York City and Texas), and when Catholic schools are the schools of choice.” The overlap of education and religion is not new to the Western democracies and the local churches played a role in the original American public schools. Ironically, while America denies the role of religion in its public schools, many European democracies have embraced school choice that includes state-funded religious schools (Berner, 2017; Maranto & van Raemdonck, 2015).

As private schools, we contend that religious schools are best accountable to consumers in the form of parents and not to the government. Chubb and Moe (1990) develop the likely superiority of consumer rather than state driven schooling. They argue that institutional reform is the key to better schools and an indirect control of the schools through markets and parental choice is the best hope for educational effectiveness.

Numerous studies done on private schools have established that religious schooling contributes to civic values and practices much more strongly than public schooling (DeAngelis & Wolf, 2016; Bettinger & Slonim, 2006; Mills & Wolf, 2016). Dronkers (2016) shows that Dutch Islamic schools not only have a positive value added for student achievement after controlling for socio-economic background, but also the schools do well on non-cognitive measures. Merry and Driessen (2016) report that in 2002, the Dutch Education Inspectorate concluded that 90% of the Islamic schools were aiding the process of integration of Muslims in Dutch society. Abernathy (2005) notes that increased competition due to school choice affected the voting behavior for the state of New Jersey. Basford and Traeger (2014) have shown Somali students adapted to civic values and
expressed a greater acceptance of American society in the ethnocentric charter schools in Minneapolis, consistent with similar findings for Somalis in the private school choice environment of Sweden (Mohme, 2017). Catholic schooling in the U.S. has contributed to successful integration in society (Bryk, Lee, & Holland, 1993). Catholic schools enroll growing number of non-Catholic and minority students (McDonald, 2000) and produce equal or better civic outcomes than traditional public schools (Wolf, 2007; Berner, 2017). The relatively new Islamic schools in the U.S. are likely to contribute towards the common good in a similar fashion to the relatively older Catholic schools. Thus, a deep grounding in one’s faith and religious community through Islamic schooling can in fact facilitate successful assimilation within a largely secular society. We argue this holds for Islamic schools in the cultural West.

In contrast, state control or state influence in religious schools has a history of promoting intolerance when compared to decentralized and privately administered religious schools. There are far fewer fighters in the Syrian and Iraqi battlefields from India, which is home to the third-largest population of Muslims,13 than from other Muslim and Western countries. Concerning the ongoing wars in Iraq and Syria, calculations14 for number of foreign fighters per million people by the International Centre for the Study of Radicalization and Political Violence do not list India. This is not to say that few Indian Muslims have not gone overseas to join the terrorist organizations, but their representation is least after taking the Indian Muslim population's size and India’s history of religious conflicts in account. India’s religious schools are largely free of government control and the Islamic religious institutions (madrasas15) in India have strongly protested any government attempt to bring the religious institutions under its control.

Conditions differ where the state regulates religious schools to promote particular religious schooling for regime support. There could be objections to this hypothesis that the geo-politics of the countries are different, however, none other than Al-Qaeda expressed frustration with this by releasing a video entitled ‘Why is there no storm in your river?’ (Ahmad, 2013). Al-Qaeda’s frustration with Indian Muslims has continued to grow till today.16 The Syrian and Iraqi battlefield has more fighters from Western nations both in numbers and in proportion to their Muslim population than from many Muslim majority nations. Weaver (2015) says “More British Muslims have joined Islamist militant groups than serve in the country’s armed forces.” Sociology should address why Indian Muslims, who arguably have genuine grievances, join foreign battlefields in far lower proportions than Pakistani, Saudi, and Western raised individuals. A potential explanation is the existence of state-independent madrasas in India, which provide the Muslims with stakes in the system and thus reduce radicalization and terrorism.

13 Hackett (2015) says that by 2050, Indian will have world’s largest population of Muslims.
14 http://www.rferl.org/a/foreign-fighters-syria-iraq-is-isis-isil-infographic/26584940.html
15 Islamic schools, mostly prevalent in parts of Asia and Africa.
In summary, observers may be incorrect in ascribing the trail to terror to Islamic religious schools. The assumption that public schools promote tolerance and private religious schools promote intolerance should be empirically tested. An important arena in which to test this claim is regarding the most intolerant of acts: terrorism in the cultural West. Islamic schools operating independently in choice-based educational markets need to please parents, who, after all, do not want their children to become terrorists. State support for authentic Islamic religious schools in the West could provide the instruction for young Muslims truer to the Muslim faith and less critical of the West because it would be transparent and subject to public scrutiny. O’Neill (2010, p. 68) notes that a majority of Islamic schools in the U.S. are governed independently of local mosques. Independent religious schools, supported by the state, could be a highly effective anti-terrorism vehicle in the cultural West. We think that the evidence from terrorist activities to date provide empirical support for our claim.

Data

This section describes the data sources for testing if religious and specifically Islamic schooling is associated with successful cases of homegrown terror or not. Before beginning the project, we contacted major experts in the area to get their views on the question of private schooling and western terrorists. The views by Robert Pape at the University of Chicago, Thomas Hegghammer at the Norwegian Defence Research Establishment, Diego Gambetta at European University Institute, Joshua Freilich at The City University of New York and Brent Smith at the University of Arkansas were constructive. The New America Foundation provided the complete list of fatal jihadist and right wing attacks since 9/11. Databases like The National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland were also searched to see if they collected information on the educational background of terrorists. Freilich et al. (2014) provided useful data which was crosschecked with the other sources. Mueller (2013) included individual case studies which helped us trace the history of western terrorists. Internet searches were used to fill some data gaps. We combined all of this information into a single database of the educational and backgrounds of all western terrorists since 9/11. To the best of our knowledge, our database is the first to codify information on all levels and types of schooling of western terrorists. We then used the database to test the claim that private religious schooling promotes terrorist activity.

Research Design

The study is based on collecting the high school profile of individuals raised in the West who successfully committed acts of terror on the western soil. The article does not delve into questions of foreign and domestic politics or religion and ideology since they have been studied elsewhere, as described in the framing sections above. This study focuses on the single vital question of the association between private education and extreme intolerance in the form of terrorism.
Although our analysis is confined to acts of terror in the U.S., we discuss some European terror events to explore the external validity of our findings. We focus our research on the U.S. because:

1) It does not share a border with countries that directly suffer terror or insurgency, so terrorist infiltration is of little concern (Laqueur, 2016).
2) It does not have a territorial dispute that is tied to acts of terror.
3) It is not known to have inflicted state sponsored violence on citizens in the post-Soviet era.  
4) It is economically prosperous and defends many individual liberties, so individuals born and raised in the U.S. have few obvious motivations to commit acts of terrorism.

Indeed, Francis Fukuyama (1992), in *The End of History and the Last Man*, claimed there existed a consensus that the West had discovered the formula for societal success. All countries, according to Fukuyama, would soon evolve toward the model of capitalist democracy common in North America, Europe, the much of Asia. Until quite recently, with the notable exception of the IRA and Basque separatists in Spain, domestic terrorism was almost non-existent in the west.

To the best of our knowledge, no prior research has examined systematically the educational background of Western born terrorists. As a preliminary analysis, we focus only on the high school level of education, recording attendance at public or private schools. Data for schooling of all the terrorists at all levels from K-12 is not available. A lack of control variables measuring non-schooling factors that could influence terrorist activity means that our analysis is merely exploratory and not causal. Although even a single act of terror is a regrettable horror, from a statistical sense, the sample of people who have committed terrorist acts in the U.S. since 9/11 is small. Future associations between private schooling and terrorist activity might be different should additional acts take place that diverge from the pattern we describe here.

The terrorists analyzed in this paper are limited to those born and raised in the U.S., with right-wing affiliations, who actually managed to commit an act of terror. We limit our study to right-wing terrorists because Jihadist ideology is a politically conservative form of extremism (Lee, 2011). For example, Ismaaiyl Brinsley may have been inspired by Black Lives Matter but we exclude his case because BLM does not advocate violence and is not politically conservative. Similarly John Allen Muhammad, the “Beltway sniper”, was a U.S.-born Muslim who spread terror but his purpose was to kill his ex-wife in order to gain custody of their children. The terrorism he engaged in was instrumental to making his wife’s murder look like a terrorist act, so we exclude him. Naveed Afzal Haq clearly committed an act of terror but his prior actions include arrest for public exposure and

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17 We have thus excluded South Asia, China, Russia, Middle East, South East Asia and Northern Africa and other regions.
other behaviors that suggest mental illness, and not right-wing ideology, motivated him to commit terror. Finally, we exclude cases such as Alton Nolen in Oklahoma where the possible terrorist was accused but never legally charged with a terror-linked crime. One takeaway from the data below is that there really are not very many actual successful U.S. born and raised ideologically motivated Muslim terrorists, certainly not compared to Europe. But are private Islamic schools associated with the few terrorists who have emerged from the American Muslim community over the past 16 years? That is our question here.

Consistent with the principles of Bayesian inference (Edwards, Lindman & Savage, 1963), we first determine the percentage of Muslims in the U.S. who attend private high schools to find an empirical basis for an increased likelihood of a U.S. Muslim committing terrorism due to attending private Islamic schools. Then we compare that likelihood of having attended a private high school, given that a person is an American Muslim, with the likelihood of them having been privately educated, given that they committed a terrorist act.

**Results**

We conduct separate analyses of explicitly jihadist terrorists (table 1 A) and non-jihadist right-wing terrorists (table 1 B). Out of the twelve profiles of jihadist terrorists, we could collect educational data on only seven. For the thirty-three profiles of right-wing non-jihadist terrorists, we could collect educational data for only fifteen. All seven jihadist individuals are males who attended public schools. Of the fifteen right-wing non-jihadist terrorists for which we were able to obtain data, eleven attended public schools, three attended private schools, and one was homeschooled.

<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
<th>Description</th>
<th>Year</th>
<th>School Type</th>
<th>School Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jihadist</td>
<td>John Allen Muhammad</td>
<td>Killed by suspects prior to the spree in Washington DC</td>
<td>2002</td>
<td>Public</td>
<td>Scotlandville Magnet High School</td>
</tr>
<tr>
<td>Jihadist</td>
<td>Joel Henry Hinrichs</td>
<td>University of Oklahoma Bombing</td>
<td>2005</td>
<td>Public</td>
<td>Roy J. Wasson High School</td>
</tr>
<tr>
<td>Jihadist</td>
<td>Naveed Afzal Haq</td>
<td>Seattle Jewish Federation Shooting</td>
<td>2006</td>
<td>Public</td>
<td>Richland High School (Washington)</td>
</tr>
<tr>
<td>Jihadist</td>
<td>Abdulhakim Mujahid Muhammad</td>
<td>Little Rock Shooting</td>
<td>2009</td>
<td>Public</td>
<td>Memphis' Craigmont High School</td>
</tr>
<tr>
<td>Jihadist</td>
<td>Major Nidal Hasan</td>
<td>Fort Hood Shooting</td>
<td>2009</td>
<td>Public</td>
<td>William Fleming High School</td>
</tr>
<tr>
<td>Jihadist</td>
<td>Yusuf Ibrahim</td>
<td>Ibrahim shot and killed 25-year-old Hanny Tawadros and 27-year-old Amjad Kond after he abducted them in February 2013 and buried them in a shallow grave in Atlantic County.</td>
<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jihadist</td>
<td>Ismaiyil Brinsley</td>
<td>shot two NYPD cops in Brooklyn’s Bed Stuy neighborhood</td>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jihadist</td>
<td>Zale Thompson</td>
<td>Queens hatchet attack</td>
<td>2014</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jihadist</td>
<td>Syed Rizwan Farook</td>
<td>San Bernardino shooting in California</td>
<td>2015</td>
<td>Public</td>
<td>La Sierra High School</td>
</tr>
</tbody>
</table>

19 Information available at http://securitydata.newamerica.net/extremists/terror-plot.html?id=1793
To determine if these limited associations between private schooling and terrorism suggest a connection between the two, we consult data on private school attendance in general and private Islamic school attendance in particular. In 2013-2014, 208 private Islamic schools in the U.S. enrolled 35,295 students (National Center for Education Statistics, 2017a). A total of 4,097 students were enrolled in Islamic high schools that year, representing just .03 percent of the 15.3 million secondary school students that year, as most Islamic schools in the U.S. end at grade 8 (Keyworth, 2006). O’Neill (2010, p. 5) reports that only three percent of American Muslims attend private Islamic schools. Since approximately ten percent of high school students in the U.S. attend private schools (National Center for Education Statistics, 2017b), the likelihood of a Muslim attending a private Islamic school is lower than the general likelihood of private school attendance.

Table 1 B: Successful right wing terror attacks committed in U.S. by U.S. born and raised individuals since 9/11.

<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
<th>Description</th>
<th>Year</th>
<th>School Type Attended</th>
<th>School Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Wing</td>
<td>Wade Lay</td>
<td>Tulsa OK, Bank Robbery</td>
<td>2004</td>
<td>Public</td>
<td>Friends School of Baltimore</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Christopher Lay</td>
<td>Tulsa OK, Bank Robbery</td>
<td>2004</td>
<td>Public</td>
<td>Jefferson High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Jim David Adkisson</td>
<td>Knoxville, TN Church Shooting</td>
<td>2008</td>
<td>Public</td>
<td>North Catholic High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Keith Luke</td>
<td>Brockton, MA Murders</td>
<td>2009</td>
<td>Public</td>
<td>Topeka High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Scott Roeder</td>
<td>George Tiller Assassination</td>
<td>2009</td>
<td>Public</td>
<td>Topeka High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>James Von Brunn</td>
<td>Holocaust Museum Shooting</td>
<td>2009</td>
<td>Public</td>
<td>JvB was educated in public schools</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Robert Andrew Poplawski</td>
<td>Pittsburgh Police Shootings</td>
<td>2009</td>
<td>Private</td>
<td>North Catholic High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Albert Robert Gaviola</td>
<td>Flores Murders, Pima County, AZ</td>
<td>2009</td>
<td>Private</td>
<td>North Catholic High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Jason Eugene Bush</td>
<td>Flores Murders, Pima County, AZ</td>
<td>2009</td>
<td>Private</td>
<td>North Catholic High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Shawna Forde</td>
<td>Flores Murders, Pima County, AZ</td>
<td>2009</td>
<td>Private</td>
<td>North Catholic High School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Andrew Joseph Stack</td>
<td>Austin, TX Plane Attack</td>
<td>2010</td>
<td>Private</td>
<td>Milton Hershey School</td>
</tr>
<tr>
<td>Right Wing</td>
<td>Raymond Franklin Peake</td>
<td>Carlisle, PA Murder</td>
<td>2010</td>
<td></td>
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<td>2015</td>
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<td>Robert Dear</td>
<td>Colorado Planned Parenthood Shooting</td>
<td>2015</td>
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<td>Right Wing</td>
<td>James Harris Jackson</td>
<td>New York Stabbing</td>
<td>2017</td>
<td>Private</td>
<td>Friends School of Baltimore</td>
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Note: Results are derived from basic internet searches. Cells for which data was not available through internet searches have been left blank.
Given that a U.S. born adult is a Muslim, there is a 3 percent chance that he attended a private school. Given that a U.S. born adult is a Muslim terrorist, there is a 0 percent chance that he attended a private high school. Thus, although the actual educational histories of seven Muslim terrorists do not support the claim that private Islamic schools encourage people to commit terrorist acts, they also do not necessarily support the claim that private Islamic schools discourage people from becoming terrorists. It is possible that the main reason why no U.S. Muslim terrorists have been privately educated is because so few U.S. Muslims attend private Islamic schools.

The evidence regarding non-jihadist right-wing terrorists is similarly inconclusive. Given that a person is a U.S. born adult, there is a 10 percent chance that he attended a private high school. Given that a U.S. born adult is a right-wing terrorist, there is a 20 percent chance that he attended a private high school. Although private school attendance is associated with a higher likelihood of having committed a right-wing terrorist act, with only 15 cases to draw from, this preliminary analysis is only suggestive of such a link.

**Conclusion and Policy Implications**

With limited data, this analysis indicates that there is lack of empirical basis to claim that religious and specifically Islamic schooling in the United States is associated with homegrown terrorism. Among the U.S.-raised Muslims charged with committing or attempting to commit acts of terrorism in the west, all for whom we have data attended traditional public schools. There is an interesting historical analogy, in that in the 19th and early 20th Century American Catholic schools were seen as divisive to the polity. In fact, as the past 30 years of research has shown, Catholic schools seem to increase rather than decrease patriotism, civic activity, tolerance as well as effectiveness (Bryk, Lee & Holland, 1993; Manno & Graham, 2001; Campbell, 2008). The same could be true of Muslim schools in the U.S.; however, their current small scale provides little evidence at this point to confirm that possibility.

Greater access to religious schooling may benefit the society and religious schooling may moderate the frequency of acts of terror in the West. A key recommendation for policy makers is to encourage decentralized and private school choice and evaluation of Islamic schools based on measurable outcomes. This recommendation is especially acute as Muslim nations suffer from bad governance, unpopular regimes, restless and uneducated youth (Hackett et al., 2016; Ummid news, 2015). Decentralized and private religious schooling could moderate the causal link between hate and violence in the form of terrorism. Local quality Islamic education and the higher education of Imams of mosques in U.S. universities may also promote tolerance among Muslims. A lack of quality local schooling options in the Middle East have increased the role of Saudi Salafi and Wahhabi Islam funded by petrodollars. A market oriented approach to Islamic schooling can increase adherence to the traditional approach to Islam and weaken fundamentalism. Government can aide this process through greater access to private religious schools. An alternate approach is to also provide religious instruction in existing public schools; this
may increase the plurality of public education that may add to creating democratic citizens (Berner, 2017). In many cases it could be possible that the marginal terrorist can be brought back to sanity if his or her spiritual and social needs can be met through religious schooling.

School choice has the potential to serve disadvantaged minorities better than public schools (Tooley, 2009; Muralidharan & Sundararaman, 2015; Howell & Peterson, 2006). In religious private schools, students from other religions and cultures self-select for a better quality of education, generating social and religious diversity within such private schools (Trivitt & Wolf, 2011). It is surprising to know that this doesn’t only happen in affluent Catholic schools in some countries outside the U.S. but also in some of the not so affluent Islamic schools in India which Hindu students self-select into for educational needs (Al Jazeera English, 2013). This shows that the market produces more options for diversity and acceptance by choice. The schools created for the disadvantaged minorities in a free-market would be open to everyone. The decision to create a school for minorities would again be based on consumer demand and not regime goals that might be antithetical to political tolerance.

We acknowledge that some findings of terrorists having attended religious private schools goes against our hypothesis that market and plural education is better than a statist approach to education. However, as mere attendance at a public school does not make one a democratic citizen, mere attendance at a religious school does not make one a fundamentalist or terrorist. Further research is need for the few cases where terrorists attended religious schools to see if religious values were in fact translated to these individuals at the schools. Additionally, researchers need to examine if terrorists built a socio-religious identity due to their religious schooling that then led them strike at their fellow citizens with terrorism. We hypothesize they did not.

This study aims to encourage further research into the education profiles of people who commit violence and, secondly, calls for evaluation and proper design of Islamic curriculum in schools which can cater to the social and spiritual needs of Muslims. Independent researchers, child psychologists, trained religious instructors and sociologists should build upon the pioneering work of Jaap Dronkers in this field. To support such research, government agencies should produce more detailed and comprehensive databases regarding the backgrounds of people who commit terrorist acts. We drew from multiple data sources for this study and still only obtained the evidence that we needed from about half of the cases that could have been included in the study.

The current study focused on only successful acts of homegrown terror committed by U.S. born and raised jihadists and right wing terrorists, thus limiting the study power. For a comprehensive understanding of the link between formal religious schooling and terrorism, future research should extend our work, and include both successful and unsuccessful acts of terror from all western nations, after the fall of the Soviet Union.
Information on the formal and informal religious schooling of terrorists from the K-12 levels would provide a more in-depth analysis. We think there is good reason to believe that providing increased access to modern Islamic schooling in the U.S. would address the spiritual and religious needs of Muslim students. Providing people with a stake in society through a system of school choice can be a way to moderate any inclination towards terrorism. We look forward to more research on this vital topic.

References


Abstract

A strong focus of Jaap Dronkers research work was on socioeconomic inequalities in education. One of his major contributions was to include cognitive ability in the analyses of educational inequalities, most commonly in the analysis of school tracking. This paper follows in this tradition by presenting evidence that the emphasis by both researchers and policymakers on students’ socioeconomic status (SES) is very much misplaced. It questions the validity of the concept SES, its measurement and the ability of theory to explain the relationships between SES and educational outcomes. It presents evidence showing that cognitive ability is a far more powerful influence on educational outcomes than SES and much of the variation in cognitive ability, student achievement and educational attainment is genetic. This evidence has important implications for both researchers in education and policymakers in educational bureaucracies.

Keywords: socioeconomic status, cognitive ability, socioeconomic inequalities

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Education is not about SES

I spent three weeks at the European University Institute (EUI) in October 2006 sponsored by Jaap Dronkers. He invited me to the institute after some email correspondence about data from the OECD’s Programme for International Student Assessment (PISA). My employing organization at that time, the Australian Council for Educational Research was the lead organization for the PISA study. Since I access to the data and was involved in the development of the student and teacher questionnaire I had mined the PISA data as much as I could, publishing articles on students’ socioeconomic status (SES), ethnic, gender, between- and within-school, immigrant and family differences in student achievement. Our interests coincided because Jaap was also working on PISA specifically, immigrant-native differences in PISA scores from which he published several articles in high ranking journals. He was a good host: friendly, very knowledgeable and interesting to talk to. Since that time, I had sporadic email exchanges with Jaap, mainly about SES, ability and tracking until March 2016 when I received the news that he had passed away.

Early in my stay at the EUI, we talked about the PISA study and the obsession researchers and bureaucrats had with SES. The prominence of SES in the PISA study was partially my fault because I successfully advocated including questions on parents’ occupation in the PISA questionnaire so that analysts could use International Socioeconomic Index (Ganzeboom, de Graaf, & Treiman, 1992). Most previous international studies of student had collected, often very unreliable, data on parents’ education and/or possessions in the home. Given differences in the way education is organized in different countries and issues about possessions being a suitable measure of wealth, it was important to have a reliable internationally comparable measure of SES. In one conversation with Jaap, I clearly remember him saying something like “the whole of PISA is driven by student ability”. At this point, I thought “here is a guy I can really talk to” and we discussed why the concept of cognitive ability is hardly ever considered as relevant to student achievement or educational attainment. We agreed that the absence of ability in such research has much to do with political ideology; researchers wish to focus on SES inequalities because it is far more ideologically palatable.

Jaap had another important role in my academic work; he was the designated reviewer for my book, Education, Social Background and Cognitive: The Decline of the Social (Marks, 2014b) in which I argue that socioeconomic inequalities are much smaller than generally believed, that in most counties socioeconomic inequalities have declined and cognitive ability is, and has been for a long period, a much stronger influence on a range of educational outcomes. I never saw his review but I assume that it was positive. After the book was published, he contacted me and congratulated me on the book.

Jaap’s primary interest was on sociological inequalities in education; including immigrant, gender and family as well as SES differences. Like me he was interested in the modernization thesis of declining socioeconomic inequalities (Dronkers, 1993; Faasse, Bakker, Dronkers, & Schiff, 1987). A considerable part of Jaap’s research was concerned
with cognitive ability. He was particularly concerned with school tracks and the influence of SES vis-à-vis student ability. Vrooman and he (1986, p. 77) showed strong correlations (0.59 for the 1940 cohort and 0.66 for the 1965 cohort) between test score and advice on which secondary school to attend in the Netherlands. The impact of test scores in relation to advice on which secondary school to attend was larger in the 1965 cohort ($\beta=0.58$) than the 1940 cohort ($\beta=0.44$), net of social class ($\beta=0.58$ for both cohorts) supporting two key contentions of the modernization thesis that educational success is much more about ability than SES and ability is becoming increasingly important. In the Netherlands he and Korthals (2016) found that ability was the dominant influence on track placement although there were effects for parental education. More generally, they found the effects of social background are minimized when track selection is based purely on prior performance (Korthals & Dronkers, 2016). The 1940 cohort was analyzed by Jaap to investigate the effects of early cognitive ability on educational attainment and subsequent labor market outcomes (Dronkers, 1998). He found that cognitive ability was important for educational attainment but had no direct effects for labor market outcomes; all its effects were mediated through education.

Therefore, this paper is a review of the literature regarding the inter-relationships among SES, cognitive ability, school tracking, student achievement and educational attainment. This paper develops ideas and updates evidence from my book and more strongly emphasizes genetics. Genetics is even more politically unpalatable than cognitive ability.

This paper provides empirical evidence that is contrary to much accepted wisdom regarding education. I question the validity of the concept SES, its measurement and the ability of theories the explain the relationships between SES and educational outcomes. The commonly used indicators of SES are not highly correlated and together do not constitute a reliable measure. SES, no matter the conceptualization or measure employed, is not a strong influence on educational outcomes, especially when considering prior performance or student ability. Cognitive ability is much stronger influence on both student achievement and educational attainment and all three concepts have sizable genetic components. The first part of the review discusses the central concepts: cognitive ability, student achievement, educational attainment and SES. The second part presents research conclusions supported by the available empirical evidence. Readers should be aware that the arguments are mine and should not be attributed to Jaap.

The following arguments about cognitive ability, SES and genetics are not particularly new stretching back nearly fifty years to Jensen’s (1969) *How Much Can We Boost IQ and Scholastic Achievement?* and Jencks et al.’s (1972). The issue became very prominent with the publication of Herrnstein and Murray’s (1994) *The Bell Curve*. It may have been possible, in say 1980, to critique arguments that SES only weakly effects educational outcomes and that ability has much stronger effects and much of the variation in education is genetic on measurement or methodological grounds the accumulated evidence over the last fifty years is so large that it really cannot be ignored, although many researchers choose to do so.
Central Concepts

Cognitive Ability

Cognitive ability or intelligence is defined as “a very general mental capability that, among other things, involves ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience” (Gottfredson, 1997, p. 13). Similarly, Neisser et al. (1996, p. 77) define intelligence as the “ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought”.

Source of Cognitive Ability is Parents’ Ability not SES

The main source of cognitive ability is parents’ ability, not SES. There are sizable correlations between parents and their children’s cognitive abilities. White’s (1982, p. 469) a meta-analysis of 102 studies calculated an average correlation between ability and SES of 0.4. Other studies found that the intergenerational correlations for cognitive ability range between 0.4 and 0.6 (Bouchard & McGue, 1981; Grohnqvistb, Ocker, & Vlachosd, 2014; Plomin, DeFries, Knopik, & Neiderhiser, 2013, p. 195; Scarr & Weinberg, 1978). The observed parent-child correlations for cognitive ability of between 0.4 and 0.6 accord with a theoretical correlation of 0.5 that assumes ability is a continuous polygenetic human trait, and that parents and their biological child share, on average, 50% of their genomes.

In regression analyses of child’s IQ with parent’s ability and measures of students’ SES, parent’s ability has substantially stronger effects. Often the impact of SES is trivial or not statistically significant, net of parent’s cognitive ability. Scarr and Weinberg (1978, p. 681) found that only 11% of the variation in adolescent IQ was accounted for by four SES measures: father’s education and occupation, mother’s education and family income. Adding parents’ ability increased the explained variance to over 30% and the effects of the SES measures were not statistically significant.

Cognitive Ability has a Strong Genetic Component

A central concept in behavioral genetics is “heritability”, the proportion of variation in a trait due to genetic differences. Heritability allows a comparison of the relative importance of genes and environment to the variation of traits within and across populations (Visscher, Hill, & Wray, 2008). Heritability can be estimated from classical twin studies, identical twins separated at birth, adoption studies, extended kinship designs (often based on twins) and molecular genetics studies. Generally, pairs of genetically more similar individuals exhibit stronger inter-correlations than pairs with weaker genetic relationships. Associated concepts are the common environment which includes the classic sociological concepts of social class and SES, indicators of SES such as parental education and occupation, family income and wealth. The third component is the
unique or unshared environment which includes influences unique to individuals and measurement error. These three components are commonly referred to as A (Additive genetic), C (Common environment), and E (Error). Bivariate heritabilities are an extension of univariate heritability: the proportions of the correlation or covariation between two traits (or variables) due to genes.

Cognitive ability has a strong genetic component. A variety of studies estimate heritabilities of between 0.5 to 0.8 with a much smaller proportion of the variance, typically less than 0.2, attributed to the common environment (Deary, Johnson, & Houlihan, 2009; Nielsen, 2006; Plomin, Fulker, Corley, & DeFries, 1997; Plug & Vijverberg, 2003; Rowe, Jacobson, & Van den Oord, 1999; van Leeuwen, van den Berg, & Boomsma, 2008). Even critics of *Bell Curve* estimate inheritabilities for IQ of around 0.50 and a much smaller effect for the environment below 0.2 (Daniels, Devlin, & Roeder, 1997, pp. 54-58). Nielsen (2006) estimates ACE variance components for IQ at 0.53, 0.14 and 0.33. Plomin et al. (1997, p. 445) conclude that environmental transmission of cognitive ability from parent to child is negligible.

**Student Achievement**

National assessments of educational achievement aim to provide evidence about the levels of student achievement in identified curriculum areas for example, in the domains of reading literacy, mathematics or science (Postlethwaite & Kellaghan, 2008). International assessments of student achievement allow comparisons between different educational systems aiming to identify what policies promote both higher achievement and equity. This review makes numerous references to the OECD’s Program for International Student Assessment (PISA) which focuses on student achievement in reading, mathematics and science of 15-year-olds. System-wide achievement studies include the Key Stage tests in the United Kingdom, CITO in the Netherlands and NAPLAN in Australia. Most US states have system-wide testing regimes.

Not only does student achievement serve to monitor education systems, student achievement is strongly predictive of subsequent educational and post-school outcomes. Student achievement as measured in the OECD’s PISA study is highly predictive of adult educational and labor market outcomes (Fischbach, Keller, Preckel, & Brunner, 2013; Marks, 2013; OECD, 2010). This is within the wider literature of the effects of test scores in achievement studies collected in adolescence on subsequent educational and labor market outcomes (Jencks et al., 1979; Jencks et al., 1972; Korenman & Winship, 2000; for a review see Marks, 2014b). Of course, the enduring effects of student achievement are likely to be because student achievement is a proxy for cognitive ability which is important to adults’ socioeconomic outcomes (Strenze, 2007).

**Achievement and Cognitive Ability are Conceptually Similar**

General tests of literacy, numeracy and problem solving, and tests of cognitive ability are conceptually similar. Rindermann (2008, p. 128) maintains there is no important
theoretical difference between student achievement and ability tests since they both assess “thinking and knowledge”. In PISA, literacy is defined generally as “concerned with the capacity of students to apply knowledge and skills in key subject areas and to analyze, reason and communicate effectively as they pose, solve and interpret problems in a variety of situations” (OECD, 2007, p. 16). This definition closely resembles definitions of intelligence. Baumert et al. (2009) point out that like intelligence tests, reading and mathematical assessments involve reasoning and making logical inferences. Armor (2003, p. 19) notes the similarities between achievement tests and IQ tests. Both include subset scores for types of mental skills: vocabulary, reading comprehension, mathematical concepts, numerical skills etc. He suggests that the substantial overlap between IQ and achievement scores indicates they are measuring something in common, general reasoning skills (Armor, 2003, p. 19).

The logic of modern test theory which is the basis for modern achievement tests such as PISA, TIMSS, and system-wide achievement tests is that the probability of correctly answering a test item is a function of student ability and the difficulty of the item. At the country level, there are sizable correlations between average PISA score and intelligence scores (Lynn & Meisenberg, 2010; Lynn & Mikk, 2009). It is surprising that the concept of “ability” is almost never mentioned in reports on academic articles based on PISA, TIMSS or system-wide tests of student achievement. To this today, I have yet to read an OECD PISA report that acknowledges that student performance in PISA may relate to students’ cognitive abilities.

**Student Achievement is Very Stable**

The stability of student achievement is well-known at least since the early 1970s. The over-time correlations of achievement range from 0.5 to nearly 0.9, depending on the age or grade level of the students, the achievement domain, the number of years between tests and the reliability of the test. In the US, the correlations of test scores of the same students measured at age 8 to 10 and age 18 were between 0.7 and 0.8 (Jencks et al., 1972, pp. 59-60). Reynolds and Walberg (1992, p. 318) reported a correlation of 0.73 between mathematics achievement in grades 7 and 8. Marks (2016) documents same-domain over-time correlations from more recent studies. Armor (2003, p. 33) presents correlations for combined reading and math achievement for New York City students from Grades 2 to 3. For adjacent grades, the correlations range from 0.8 at lower grade levels to nearly 0.9 at higher grades. The correlation of Grade 3 and Grade 8 scores was 0.73. Armor notes that the correlations at higher grades are so high, that very little true change occurs (after correcting for reliability).

Although the high stability for student achievement is well-established, it is not well-appreciated. There is a tendency for researchers not to consider what the high and increasing stability means, and examine social and educational influences on achievement as if they are entirely responsible for variation in student achievement. This leads to
upwardly biased estimates and highly questionable policy recommendations (Carnoy, Khavenson, Loyalka, Schmidt, & Zakharov, 2016).

**Student Achievement is Highly Correlated Across Achievement Domains**

In a meta-analysis of studies conducted in the US, Aiken (1971, p. 306) concluded that the correlation between reading and mathematics achievement in primary school was between 0.45 and 0.55, tending to be larger in higher grades. In the UK's 1958 birth cohort National Child Development Study (NCDS), the correlations between reading and mathematics test scores were 0.50 at age 7, 0.74 at age 11 and 0.65 at age 16 (McNiece, Bidgood, & Soan, 2004, p. 134). In the later 1970 British Cohort Study (BCS), Parsons (2014, pp. 27, 35) reports inter-domain correlations between 0.58 and 0.75 for spelling, reading and mathematics at age 10 and between 0.46 and 0.72 for spelling, reading and arithmetic at age 16. In PISA, the test scores have been “conditioned” to reduce the error component, so the correlations in student achievement across the three domains of reading, mathematics and science are very high between 0.8 and 0.9 (Bond & Fox, 2001, p. 259; Cromley, 2009). Such high correlations, means that each test score is essentially measuring the same underlying concept.

**Student Achievement has a Strong Genetic Basis**

The high stability of student achievement can be explained by the strong genetic component to student achievement. A meta-analysis of 61 twin studies from 11 cohorts of primary school children showed the average heritability estimates of around 0.7 for reading, 0.5 for reading comprehension, 0.6 for mathematics, 0.6 for language, 0.4 for spelling and 0.7 for general educational achievement. The contributions of the common environment were substantially smaller with estimates mostly around 0.10 (de Zeeuw, de Geus, & Boomsma, 2015). Extended kinship designs also show high heritabilities for student achievement (Dalliard, 2014). The heritability of student achievement in primary school is greater than that for cognitive ability (Kovas et al., 2013). There are sizeable genetic correlations between achievement domains with cognitive ability indicating common sets of genes (Hart, Petrill, Thompson, & Plomin, 2009; Petrill, 2016; Wainwright, Wright, Luciano, Geffen, & Martin, 2005). However, student achievement is not simply cognitive ability; there are other genetic traits involved (Krapohl et al., 2014). It is not clear what are relative contributions to student achievement of general cognitive ability, innate specific skills (for example in numeracy or spelling) and schooling and if these contributions change over the school career.

Furthermore, there are sizeable genetic correlations (i.e. correlations between latent genetic factors) between latent achievement domains and with cognitive ability indicating common sets of genes (Hart et al., 2009; Petrill, 2016; Wainwright et al., 2005). Grasby et al. (2016) conclude that covariation among the four domains tested in the Australian NAPLAN study was largely mediated by genes. The bivariate heritabilities were often over 0.8. Plomin et al. (2013, p. 228) settle on an average genetic correlations of 0.7 between
domains and 0.6 between student achievement and cognitive ability. These overlaps explain the sizable inter-domain correlations in student achievement and the strong correlations between cognitive ability and student achievement.

**Educational Attainment**

Educational attainment is usually measured in one of two ways. The first is to measure the number of years of formal education. Therefore, high school graduates in the US are assigned a score of 12 since they have spent 12 years at school and college graduates 16, 12 years of school plus 4 years of college. At the other end of the scale, no school education is assigned a score of zero and completion of elementary or primary school only is assigned a score of 6. Although crude, this linear measure is very convenient to analyze and appropriate for studies of single-path education systems in which individuals' educational attainment is simply how far they progressed in the system. The second type of measure is the highest qualification obtained. For example, for the UK, ordinal measures of educational attainment often comprise: no qualification, O Levels (now GCSE or General Certificate of School Education), A levels, bachelor degrees and post-graduate degrees.

**Educational Attainment also has a Genetic Component**

The general conclusion from twin and familial studies on educational attainment are that genes play a greater role than the common environment. After reviewing a number of twin and adoption studies, Sacerdote (2011, p. 12) concludes “Genetic effects play a large role, while there is only a small role for family environment”. From the National Longitudinal Survey of Youth (NLSY) Rowe, Vesterdal and Rodgers's (1999) estimate a heritability of 0.68 for genes and 0.18 for the common environment. They estimated a genetic correlation of 0.63 between IQ and education. For Australia, Baker et al. (1996) estimated a heritability of 0.58 and an environmentality at 0.24 with no gender differences for either estimate. In later studies, heritability estimates range from 0.50 to 0.65 and environmentality estimates from 0.15 to 0.26 (Le, Miller, Slutske, & Martin, 2011, p. 132; Miller, Mulvey, & Martin, 2001). The most recent estimate for Australia was 0.55 (Marks, 2017). Using Italian parent and child data, Lucchini et al. (2013) estimate a heritability for educational attainment of 0.5 and question the usefulness of traditional sociological theories used to explain individual differences in education. For Norway, Tambs et al. (1989, p. 209) calculated an overall heritability for education at 0.51. For Finland, the heritability for educational attainment was 0.47 for men and 0.43 for women and the respective estimates for the common environment were 0.36 and 0.43 (Silventoinen, Kaprio, & Lahelma, 2000). Cesarini (2013) analyzing a very large Swedish data set that included seven different sibling types that differ in their degree of genetic relatedness and rearing status, which allowed the testing of various assumptions of the conventional twin model, consistently estimated heritabilities for educational attainment between 0.50 and 0.55. Branigan, McCallum and Freese's (2013) meta-analysis of 15 samples and 34 subgroups differing by nationality, sex, and birth cohort reported
averages for the ACE components of 0.40, 0.35 and 0.25, respectively, although there was much variation in the estimates. Heritability was generally higher among men than women and in younger cohorts (2013, p. 131). Recently, specific gene loci have been found associated with educational attainment (Okbay et al., 2016).

**Socioeconomic Status (SES)**

SES is ubiquitous in both educational research and policy, in the academic literatures on education and social stratification, in OECD and national government-commissioned reports on student achievement and educational attainment and by journalists and commentators writing about education and other matters. SES is considered the major influence on a range of educational outcomes across the educational career including, test scores in system-wide or achievement and other cognitive tests, grades in different subject areas, GPA, school track in tracked educational systems, within-school track or stream, school non-completion, dropping out of school, college entry and overall level of educational attainment. The general impression is that the concept of SES is valid; it is reliably measured; it has strong and unchanging causal relationships with these educational outcomes. Because education is so important for subsequent socioeconomic outcomes among adults (e.g. unemployment, employment, occupational status, earnings, wealth), SES is understood as the crucial link for socioeconomic inequalities between generations. SES is also associated with a wide range of health, cognitive, and socioemotional outcomes in children, with effects beginning prior to birth and continuing into adulthood (Bradley & Corwyn, 2002).

There is little doubt that there are statistical relationships between SES, however measured, and educational outcomes. However, there are many issues—conceptual, theoretical, measurement and statistical—that undermine SES's principal place in educational and policy research. This rest of this section details these issues and argues that SES is not a useful concept for educational research and policy. In fact, the obsession with SES is detrimental to both research and policy because it obscures the true processes involved in educational outcomes and direct policy away from individual students to social groups within which the variation in student needs, interests and abilities is enormous.

**There is little Consensus on the Conceptualization of SES**

The first issue is conceptual: what is socioeconomic status? Everyone seems to know what SES is but the concept remains nebulous. SES is generally understood as indexing advantage and disadvantage or deprivation. White (1982, p. 462) notes several instances where SES is defined tautologically by its constituent variables, rather than conceptually: family income, parents’ education and occupation, the quality of housing and the status of the area of residence. It is very common to define SES in terms in terms of its consistent variables but use fancier names. Bradely and Crowyn (2002) claim that the concept of SES is really about capital; higher SES allows greater access to financial capital (material
resources), human capital (nonmaterial resources such as education), and social capital (resources achieved through social connections). Similarly, Buchmann (2002, p. 150) argues that SES indexes the transmission of financial capital, cultural status and social capital. It is not clear where parental occupation fits in this conceptualization. According to the OCED, the rationale for their measure of SES, Economic, Social and Cultural Status (ESCS) is that it indexes the commonly used measures of SES based on education, occupational status and income (OECD, 2017, p. 36). According to the PISA 2014 technical report “Household assets are believed to capture wealth better than income because they reflect a more stable source of wealth” (OECD, 2014, p. 316). This is a highly questionable claim given that that the household items listed in the questionnaire are limited to cars, rooms with a bath or shower, mobile phones, computers, tablets, and e-book-readers which together are only weakly correlated with income or wealth. In an earlier publication, the OECD claims that ESCS indexes aspects of students, schools and education systems. At the individual level ESCS relates to parental attitudes to education and their involvement in their child’s education; at the school level to resources, a safe environment and proximity to the community’s cultural resources and at the system level, to national wealth and spending (OECD, 2013, p. 2). All these claims are post facto and quite dubious.

An alternative approach to SES is social class which is used more commonly in the United Kingdom. According to this approach the occupation of the head of the household, most often the father, is used to categorize students to a particularly social class. The focus is most often on working class and how communities, schools, teachers and parents contribute to the lower educational attainments of working or manual class students (Connell, Ashenden, Kessler, & Dowsett, 1982; Douglas, 1964; Goldthorpe, 1996; Willis, 1977).

No Consensus on How to Measure SES

SES is usually measured by father’s or mother’s education and occupation, and, if available, family income (Bradley & Corwyn, 2002; Buchmann, 2002; Orr, 2003). Some studies of SES inequalities in education focus on family income, family wealth and financial resources in the home (Orr, 2003; Reardon, 2011; Yeung & Conley, 2008). Other measures include possessions in the home as a proxy for wealth. However, there is no consensus of which of the commonly employed SES indicators is the most salient. Economists tend to focus on family income and wealth. Sociologists tend to emphasize parental occupation. Education researchers tend to focus on parental education.

The OCED’s measure of SES, Economic, Social and Cultural Status (ESCS), is a composite score constructed from parents’ education, highest occupational status of the parents, and measures of home possessions, cultural resources, educational resources and ‘books in the home’. The rationale for constructing such a complex measure is that socio-economic status is usually understood as comprising multiple components (OECD, 2017, p. 36). The problem with this omnibus measure is that conflates indicators of SES (parental education
and occupation) with variables often employed to explain SES effects on education for example, cultural and educational resources.

**SES Indicators are not Highly Correlated**

Although, the concept of SES is readily accepted, the most common SES indicators are not highly correlated. Mother’s and father’s education are the most highly correlated (at around 0.5 to 0.6) reflecting substantial educational homogamy. Across OECD countries, father’s and mother’s education and occupational status, books in the home and cultural aspects, have only moderate inter-correlations at around 0.4, often lower (see Marks, 2011, p. 227). Mueller and Parcel (1981, p. 16) argue against using parental education as a proxy for occupational status since the correlation is only around 0.5 to 0.6 and there is considerable heterogeneity in income and occupation within educational categories. Inter-correlations involving family income and wealth are also not strong: 0.31 for wealth and income, around 0.38 for both education and occupational status with income; and 0.18 for both wealth and education, and wealth and occupational status (Bowles, 1972, p. S225). Since the SES indicators are only moderately inter-correlated, composite measures do not constitute a highly reliable scalar measure. Furthermore, the only moderate inter-correlations undermine the commonly held assumption that SES is a one-dimensional concept measured interchangeably by a range of educational, occupational and economic indicators.

**The Measurement of Occupational Class is Just as Problematic**

The measurement of social class is also highly problematic. First, there is the issue about which family member defines their social class, the father or the parent belonging to the highest social class (Erikson, 1984). Second, there is no consensus of the number or defining characteristics of, or even number of, classes in contemporary societies. These include self-employment, educational qualifications, white- or blue-collar job, number or type of supervisory and managerial tasks. Third, and relatedly, the class location of a variety of occupational groups—professionals, managers, lower white-collar workers, state employees—that have grown over the last century—is not at all clear. And finally, classes are too large and heterogeneous to be useful for educational research.

**No Compelling Theory why SES should matter**

There is a plethora of theoretical explanations for socioeconomic inequalities in education. These include SES differences in: community norms and values (Willis, 1977); the value of education (Brown & Iyengar, 2008; Hyman, 1966); educational plans and expectations (Berthelsen & Walker, 2010; Brookover, Erickson, & Joiner, 1967); parenting style (Baumrind, 1989); risk aversion to failure (Breen & Goldthorpe, 1997; Goldthorpe, 1996); educational resources in the home (Pokropek, Borgenovi, & Jakubowski, 2015); codes of speech (Bernstein, 1971), the richness and complexity of the language used by parents to their child while they are learning to talk (see Rindermann & Baumeister,
2015); the home literacy environment (Brown & Iyengar, 2008); and between- and within-school tracking (Chmielewski, 2014; Oakes, 1985; van de Werfhorst & Mijs, 2010).

The reason why there are many theories on why SES should matter, and that they go in and out fashion and none enjoy as consensus is because the hypotheses generated from the theories—and some theories do not easily lend themselves to hypotheses testing—lack substantial empirical support. This is in addition to the various conceptual and measurement issues referred to above. In addition, few theories entertain the idea that cognitive ability is involved, despite the blindingly obvious fact that everybody knows: smart kids do better at school. Almost none treat seriously the evidence from research in behavioural genetics which conclude that there are strong genetic components to cognitive ability, student achievement and educational attainment.

**Research Conclusions**

**SES effects are Confounded by Parent’s Ability**

An alternative explanation to theories focusing on SES is that student’s educational outcomes have little to do with parents’ socioeconomic characteristics. Accordingly, the observed effects of family income, parental occupation and education on student achievement are due to their correlations with parental and student ability. Parents’ socioeconomic characteristics are correlated with parental ability, parental ability is strongly associated with their children’s ability and student ability is a strong influence on educational outcomes. Therefore, the theories and explanations for the SES-relationship and that immense baggage of associated empirical research are irrelevant.

Parents’ ability is correlated with the most commonly used SES indicators. Scarr and Weinberg (1978, p. 678) reported correlations of 0.56, 0.37 and 0.38, for father’s IQ with father’s education, father’s occupational status and family income. The correlations for mother’s IQ with mother’s education (0.46) and family income (0.19) were lower. Torres (2013, p. 166) reported a correlation of 0.53 between mother’s AFQT score and a composite measure of family SES. According to Strenze’s (2007, p. 411) meta-analysis, ability measured between ages 3 and 23 correlates at 0.56 for educational attainment, 0.45 for occupational status and 0.23 for income during adulthood. Focusing on college education in the US, failing to account for the mother’s ability seriously overestimates the relationship between parents’ economic resources and children’s postsecondary attainments (Doren & Grodsky, 2016).

The point here is that the SES-education relationships are less about economic resources, parenting, socialization etc., but much more about the transmission of cognitive ability from parents to their children. This explanation is consistent with large heritabilities for student achievement, educational attainment and cognitive ability and the strong relationships between cognitive ability and educational outcomes.
SES is not a major Influence on Student Achievement

The argument that SES is the major source of educational inequality is wrong. Despite the large literature on the effects of SES on children’s cognitive outcomes such as test scores and student achievement are not particularly strong. Sirin’s (2005, p. 437) meta-analysis, found that the average effect size (the adjusted correlation coefficient) for the bivariate relationship between commonly used SES indicators (family income, parental education and occupation) and student achievement was 0.30, lower than the estimate of 0.34 using a replication sample from White’s (1982) meta-analysis. The most recent meta-analysis concluded that relationship is surprisingly modest, with an average SES-achievement correlation of 0.22 (Harwell, Maeda, Bishop, & Xie, 2017).

The OECD’s broad measure of SES, ESCS which comprises many SES indicators and correlates, on average across OECD countries, accounts for 12.9% of the variation in students’ PISA scores (OECD, 2016, p. 402). This is equivalent to a (multiple) correlation of 0.36. So even if the SES measure comprises many constituent variables it explains less than 15% of the variation in student achievement.

SES has only very weak relationships with Student Performance, when considering prior achievement

The influence of SES on student performance is very small when considering prior achievement. In the presence of prior achievement, the effects of students’ SES are quite small. For the US, Benner, Boyle and Sadler (2016, p. 1059) reported standardized effects on students’ GPA of 0.44 for achievement score compared to 0.09 for family SES. For Germany, Baumert et al. (2010, pp. 159-160) report no significant effects for the International Socio-Economic Index (a measure of occupational status) on mathematics score and only one significant (but trivial) effect for parental education, net of prior achievement in mathematics (from PISA) and cognitive ability. For Australia, two recent studies of student performance conducted on state-wide data estimated standardized effects for students’ SES ranging from 0.05 to 0.15 when controlling for prior achievement (Lu & Rickard, 2014, pp. 31-32; Marks, 2014a, p. 241).

Family Income has Little or no relationship with Educational Outcomes

Family indicator is the most policy relevant aspect of SES. Government policies can do little to change the effects of parental education and occupation but can supplement the incomes of, or provide additional services to, poor families. However, family income is only a very weak predictor of educational outcomes. For the United States, Mayer (1997, pp. 90-91) estimated conventional standardized effects of 0.13 for family income on PPVT test scores, 0.06 for mathematics scores in the Peabody Individual Achievement Test (PIAT) and 0.14 for PIAT reading. Her ‘true effects’ of family income, estimated by comparing income effects at different time points, were usually smaller and not statistically significant. Analyzing mathematics achievement, Orr (2003, pp. 291, 293)
reported no effect for family income (averaged over 5 years) on mathematics achievement, net of father’s occupational status, mother’s education, mother’s ability and other variables. Carlson and Corcoran (2001, p. 789) analysis of reading scores in children aged 7 to 10 found that family income had an impact but it was relatively weak. A doubling of family income increased child’s reading score by about 3.2%. For Britain, Violato et al. (2011) concluded “a weak or absent direct effect of family economic resources on child development”. Similarly, Aughinbaugh and Gittleman (2003, p. 429) analysis of children's test scores in the US and Britain found that the effects of family income on test scores were quite small, the maximum effect was 0.08 of a standard deviation, net of other predictors including mother’s ability. 

Analyzing data from South Africa, Cherian and Malehase (1998, p. 431) concluded there was “no relationship between financial conditions at home and scholastic achievement of children from single-parent and two-parent families”. Analyzing student achievement in the Danish PISA study, Humlum (2011, p. 994) noted that the effects of family income were small and statistically insignificant. Even a substantial change of 100,000 Danish Krone (equivalent to about $US15,000) was associated with a difference of only 2.6 PISA score points.

**Cognitive Ability has much stronger Effects on Student Achievement than SES**

Cognitive ability has stronger relationships with student achievement than students' SES. Walberg (Walberg, 1984, p. 23) computed an average correlation of 0.71 between various IQ measures and academic achievement. Duckworth, Quinn and Tsukayama (2012, p. 443) reported correlations between 0.7 and 0.8 for IQ measured in grade 4, and grade 5 and 9 achievement tests. For New Zealand, the correlation between IQ at measured at ages 8 and 9 with academic performance at age 13 was 0.83 (Fergusson, Horwood, & Boden, 2008, p. 285). Kaufman et al. (2012) calculated a mean correlation of 0.8 between latent factors of cognitive ability and student achievement. The correlations increased with student’s age which may reflect the increasing heritability of intelligence. The US Scholastic Assessment Test (SAT) and the American College Readiness Assessment (ACT) are highly correlated with cognitive ability (Coyle, 2015, p. 18; Frey & Detterman, 2004; Koenig, Frey, & Detterman, 2008).

In a study of 178,599 pupils attending English state schools the correlation between general factors derived from a cognitive ability test and attainment scores on national Key Stage 2 tests in English, mathematics and science of 11-year-olds was 0.83 (Calvin, Fernandes, Smith, Visscher, & Deary, 2010). In a study of over 80,000 16-year-old students, Deary et al. (2007) calculated a correlation of 0.81 between a latent intelligence trait measured at 11 years of age with a latent trait of subject performance in the GCSE. For the Netherlands, the correlations between IQ and CITO achievement test scores increase with age: 0.41, 0.50, 0.60, and 0.63, at ages 5, 7, 10, and 12 respectively (Bartels, Rietveld, Van Baal, & Boomsma, 2002). Roth et al.'s (2015) cross-national meta-analysis of over 100,000 students calculated a correlation of 0.54 between intelligence and student performance. Again, the correlations increased with level of schooling, 0.45, 0.54 and 0.58 for elementary, middle and high school students, respectively (Roth et al., 2015, p. 123).
Detterman (2016, p. 1) in a review article about the relatively small influence of schools and teachers on students’ educational outcomes writes:

I further argue that the majority of the variance in educational outcomes is associated with students, probably as much as 90% in developed economies. A substantial portion of this 90%, somewhere between 50% and 80% is due to differences in general cognitive ability or intelligence. Most importantly, as long as educational research fails to focus on students’ characteristics we will never understand education or be able to improve it.

He (2016, p. 6) concludes that “Human intelligence or general cognitive ability accounts for at least half and probably more of academic achievement attributable to student characteristics.”

**Ability is the major Determinate of Tracking and Streaming, not SES**

Educational differentiation does not provide a strong nexus between students’ SES and educational outcomes. Ability plays a much greater role than students’ SES in the allocation of students to educational locations both within- and between-schools, that is tracking and streaming. Alexander and Cook (1982, p. 631) found that the coefficient for ability measured in the fifth grade had “by far the largest impact” for senior high school curriculum placement several years later. Ability had stronger effects for academic track placement than a composite measure of SES, net of grades and educational expectations both of which are at least moderately correlated with ability (Jones, Vanfossen, & Ensminger, 1995).

When students were allocated to distinct school types in the UK, the correlation between secondary schooling type and ability was estimated at around 0.6 (Halsey, Heath, & Ridge, 1980, pp. 160-161). As Skopek and Dronkers (2015) point out, not considering student ability in analyses of school tracking exaggerates the effects of students’ SES.

Educational differentiation does not necessarily increase SES inequalities in education. Analyzing PISA data, Marks (2006) found that the relationships between within- and between-school educational differentiation and PISA test score was largely unchanged when controlling for parents’ education and occupational status. Analyzing more recent PISA data from 185,000 students from 31 countries, Korthals and Dronkers (2016) conclude that equality of opportunity is best provided for systems with many tracks where schools always consider prior performance.

**Cognitive Ability has stronger correlations with Educational Attainment than SES**

The correlations between ability and educational attainment range from 0.5 to over 0.6. These are substantially stronger than the correlations between SES and educational attainment which are generally between 0.3 and 0.4 (Hertz et al., 2007, p. 25; Marks, 2014b, pp. 188-189) Hauser et al. (2000, p. 207) reported correlations of 0.66 and 0.62 between AFQT test scores and years of education for non-black men and women. For all
NLSY respondents in 2007, the correlation between IQ measured by adjusted AFQT test scores and years of education was 0.62 (Zagorsky, 2007, p. 493). As mentioned previously, Strenze's (2007) meta-analysis estimated an average correlation of about 0.56 between ability and educational attainment.

Similar sized correlations have been found in other countries. In the Scottish Lothian Birth 1936 Cohort study the correlation between IQ measured at age 11 and total years of education was 0.42 (Johnson, Brett, & Deary, 2010, p. 275). In the 1958 NCDS study, Schoon (2008, p. 77) reported correlations of around 0.55 between general cognitive ability and educational attainment measured by highest qualification. For New Zealand, the correlation between IQ at age 8 and 9 with a measure of educational achievement at 25 years of age (a seven-point scale ranging from no high school qualification to the completion of a university bachelor degree) was 0.54 (Fergusson et al., 2008, p. 285). For Sweden, the correlation between general intelligence and educational attainment was 0.56. For Norway, Tambs et al. (1989, p. 215) reported correlations over 0.5 for cognitive ability with years of education and highest education level attained.

**The Effects of Ability on Educational Attainment cannot be dismissed as a proxy for SES**

The association of ability with educational attainment can only partially be attributed to socioeconomic background. Jencks et al. (1979, p. 104) analyzing several data sets concluded that only 12 to 21 percent of the effect of ability on educational attainment can be attributed to measured family background variables. Using sibling studies to control for the total effect of family background, they found that unmeasured family characteristics could explain another 15 to 20% of the correlation between test scores and educational attainment. They conclude that a large “57 to 68% of the observed correlation between test scores and education is independent of family background” (1979, p. 104). The remaining 32 to 43% dependent on family background includes both social and genetic components since it is derived from studies of brothers and twins. Sewell et al. (2001, p. 27) conclude that “less than one-fifth of the association between ability and schooling could be attributed to the mutual dependence of these variables on socioeconomic background”.

**Cognitive Ability has Stronger Effects on Educational Attainment than SES**

Multivariate analyses show substantially stronger effects of ability for educational attainment than that for SES. Therefore, the SES estimates from persistent inequality studies that do not include ability are upwardly biased. Analyzing educational attainment in several US studies, Jencks et al. (1983, p. 8) report effects of academic aptitude between 0.37 and 0.46 compared to standardized effects below 0.15 for father's occupation and education, mother’s education and income with statistically insignificant effects for some of these SES indicators. With the addition of academic aptitude, the variance in education attainment accounted for doubled from 15 to 30%. In an exercise using a variety of
techniques aiming to show weaker effects of ability than those published in The Bell Curve, ability remained a stronger influence vis-à-vis a composite measure of social background that included SES indicators and other aspects of social background, family structure and the number of siblings (Korenman & Winship, 2000, pp. 155-159). Although correcting for measurement error increased the SES effect on years of schooling by up to 50% from 0.20 to 0.24 or 0.29, depending on the amount of measurement error assumed, ability remained a substantially stronger influence with a standardized effect of 0.61 (2000, pp. 153-154).

For the UK, Thienpont and Verleye (2004, p. 344) reported a standardized coefficient of 0.7 for test scores predicting educational attainment (corrected for measurement error) compared to 0.4 for parents’ education with no effect for social class. Chevalier and Lanot’s (2002) analyses of age completed formal schooling concluded that “early ability tests have a large positive effect on schooling achievement” (2002, p. 174). They also found very limited effects for family income. Bukodi, Erikson and Goldthorpe (2014, p. 298) found that the addition of cognitive ability quintiles to a model comprising parental class and education doubled the variance explained for educational attainment in both Britain and Sweden. The effects of the SES indicators decline by about one-third. In a large study of over 140,000 Norwegian males born between 1961 and 1971, the standardized coefficient for ability on educational attainment was relatively large: 0.46 compared to 0.15 for parents’ education and 0.10 for parental income (Kristensen, Gravseth, & Bjerkedal, 2009, p. 809).

Conclusions and Discussion

It should be clear to the reader that the emphasis on SES by educational researchers and policy bureaucrats is severely misplaced. Educational researchers working in bureaucracies or universities should not interpret the correlations or regression coefficients between SES and educational outcomes as evidence for the importance of the family of origin’s economic, cultural resources, socialization, parenting practices or whatever theory is currently in vogue. SES does not have powerful effects on student achievement or educational attainment, even when not considering the far more powerful influences, cognitive ability and prior achievement. Much of the variation in student outcomes is due to cognitive ability. The effects of SES, net of reliable measures of cognitive ability or prior achievement are trivial so should not provoke policy responses. Cognitive ability cannot be naively dismissed as simply a function of SES.

This evidence presented here has important implications for educational research and policy. It is all too easy to focus on SES and recommend SES based policies which will further waste public money and not benefit students. For the conclusions from educational research to be valuable they must consider the stability of student achievement, its sizable inter-domain correlations, and the importance of cognitive ability for achievement, educational differentiation and educational attainment. Instead of focusing on SES, the focus should be lifting standards for all students and ensuring that
students have flexible and appropriate educational and labor market pathways given their abilities, interests and skills.

References

https://doi.org/10.2307/748485


https://doi.org/10.3102/0002831209345157


https://doi.org/10.1093/sf/sot076


Detterman, D. K. (2016). Education and intelligence: Pity the poor teacher because student characteristics are more significant than teachers or schools. The Spanish journal of psychology, 19.


Zagorsky, J. L. (2007). Do you have to be smart to be rich? The impact of IQ on wealth, income and financial distress. Intelligence, 35(5), 489-501. doi: 10.1016/j.intell.2007.02.003
The attitude of 6-8-year-old pupils towards tales

Dorottea Vass

Abstract

In 1910, the Hungarian Society for Child Study (Magyar Gyermektanulmanyi Tarsasag) – initiated by Laszlo Nagy – launched a survey conducted among 6-8-year-old pupils, which was evaluated and processed by Laszlo Nogrady in 1917. Nearly 50 years later, Bela Toth thoroughly re-visited the issue of literary interest among young pupils. Since Toth’s research, another 50 years passed, and pupil interest might have also altered. The present empirical research analyses the attitudes of first-graders towards tales. The research respondents were 267 first grade primary school pupils from Vojvodina who were personally and individually interviewed based on the broadened version of the Toth interview questionnaire. The research results provide a complex image of the 6-8-year-old pupils’ reading habits as well as of who reads to them at home, what reading skills they dispose of, what kinds of literary texts they are interested in, what type of tale heroes they prefer. The research results not only provide valuable information upon the possibilities of developing pupils’ reading habits, but also a basis for the re-writing of textbooks and readers. The findings of the research may also be useful for libraries regarding their re-stocking phases.

Keywords: reading, first class, 6-8 years old pupils

Introduction

In Hungary, at the beginning of the 20th century, regardless of the vast supply of tales, pedagogy did not pay much attention to the value of tales. Similarly, not much concern was given to the tale requirements of beginning readers. Texts at the beginning of the 20th century were not adequate for the taste of children, namely throughout the processes of reading acquisition beginning readers were provided only with short storylines of an educational purpose (Nogrady, 1917). At the beginning of the 1900’s, the educational, cognitive, social and personality developmental values of tales were acknowledged, later on their absence from pedagogy was also identified. However, regardless of not providing children with readings of their own taste, they were reading with joy and content (Nogrady, 1917). In 1910, on the initiation of Laszlo Nagy, the Hungarian Society for Child Study started a research among 6-8-year-old pupils in Hungary focusing on their literary interests. The survey was evaluated by Laszlo Nogrady in 1917, i.e. a century ago.

50 years later, in 1967, Bela Toth, referring to the de-emphasis of 6-8-year-old pupils’ literary interests, investigated the issue of primary school pupils’ literary taste in great depth. With similar research methods applied by Nogrady, the subject was re-visited and re-surveyed.

The author of the present study has already addressed the representation of the Toth research and the social attitude of reader education in the 20th century in two separate studies (Vass, 2015; 2017c). One of the studies which concludes that the values of tales are a common knowledge for the laypeople as well (Vass, 2017c), and rich professional literature approaches tales as a concept of pedagogy and scientific interpretation (Arnica, 2005; Bettelheim, 2011; Boldizsar, 2010; Erdelyi, 2012; Kadar, 2012; Nyitrai, 2009, 2010, 2015, 2016; Petrolay, 2013; Spitz, 2015). It is also common knowledge that tales positively influence the process of children becoming adults (Bettelheim, 2011), they also provide mental support in achieving their goals (Boldizsar, 2010), thus tale reading to our children can never be a too early activity, merely the stories need to be adapted to their age (Bozoky, 2009; Vekerdy, 2013). Besides the verification of all these factors, the values of tales in the development of an individual’s cognitive, social and personal growth also play a crucial role (Bettelheim, 2011; Boldizsar, 2010; Kadar, 2012, 2014; Nyitrai, 2009, 2010, 2015, 2016). However, it is also a common knowledge nowadays that children do not find reading to be joyful. Several research has dealt with this issue, whose authors argue that difficulties in reading acquisition induce the phenomenon (Bardos, 2009; Harper, 2009; Jozsa–Jozsa, 2014; Jozsa–Steklacs, 2009; Szenczi, 2013). According to them, first graders who show curiosity towards reading at the beginning of the academic year tend to show disinterest by the end of it. Researchers, following the survey of subsequent grades, pointed out that pupils do not find reading to be joyful, thus the issue needed to be addressed (Bardos, 2009; Benczik, 2009; Boldizsar, 2001; Gombos, 2010). Szenczi considered motivation to be relevant in handling this matter (2013), i.e. his research focused on primary school pupils attending fourth, sixth and eighth grades. Jozsa and Steklacs argue that in order for children to demand reading it is crucial to provide them
with versatile types of texts (Jozsa–Steklacs, 2012); according to Boldizsar (2001) children ought to encounter with texts and readings they can emotionally be attached to; Cserhalmi (2001), however, argues upon the influential character of reading-books for the sake of taking to reading. In a previous study of mine (Vass, 2016a), the formation of positive attitudes towards reading has been emphasized starting the first grade of primary school education. It is indeed crucial to pay considerable amount of attention to the development of reading skills, but simultaneously it is also inevitably essential to establish positive attachment towards reading among young readers. Therefore, it is advisable to start this process by introducing texts and reading adequate to the interests of beginning readers.

Whereas in the 21st century, not much research has dealt with the attitudes of 6-8-year-old children towards literature and the above mentioned two surveys (Nogrady, 1917; Toth, 1967) addressed a still up-to-date issue with an effective and practical research sample, I considered it worthwhile to re-visit and re-think the subject of attitude analysis of 6-8-year-old children towards literature (Vass, 2016c). I strongly believe that for the establishment of positive emotional attachment towards reading it is inevitable for children to encounter such literary texts and tale-heroes that they admire and cherish. The relationship between favorite tale-heroes and readers has not been discussed and analyzed so far, except for two influential studies of the last century (Nogrady, 1917; Toth, 1967).

Data collection

Data for the research was provided by first grade primary school pupils whose mother tongue is Hungarian in Vojvodina (N=267). The author conducted the interviews with the pupils in person and individually. In total, first grade primary school pupils from 16 municipalities22 were interviewed during data collection (59.6% of the municipalities were villages, while 40.4% were towns). 146 of the respondents were female (54.7%) and 121 were male (45.3%). Their average of age is 7.29. Throughout the interviews which generally lasted 30 minutes, the following questions were discussed: whether pupils’ parents usually read to them at home, who reads to them as well as their favorite tale and its heroes were also touched upon. This introductory segment was followed by the pre-designed and planned (Vass, 2016b) illustration of tale-heroes out of which pupils were requested to choose their favorite characters and improvise a tale based on them. Based

on their responses, various categories of tales were established. If any of the responses coincided with Toth’s categories, they were applied.

Research Questions and Hypotheses

Q1: What free time activities prefer 6-8-year-old children?  
Q2: What reading skills do first grade primary school pupils have?  
Q3: What reading habits do first grade primary school pupils have?  
Q4: What literary texts 6-8-year-old children are interested in?  
Q5: What tale-hero types raise the attention of 6-8-year-old children?  
Q6: What tale-hero types are less interesting for 6-8-year-old children?  
Q7: Do 6-8-year-old children prefer watching television to reading?

H1: First grade primary school pupils from Vojvodina are not interested only in stories related to the lives of other children and animals, but also in contemporary literary and natural scientific texts as well as contemporary poems.  
H2: 6-8-year-old children from Vojvodina show interest in “different heroes” and not heroes from folk tales.  
H3: 6-8-year-old children from Vojvodina show interest in heroes from folk tales who are endowed with new features.  
H4: 6-8-year-old children’ literary taste is influenced by movies and cartoons they watch and also fancy, however they fail to encounter similarly positive experiences when they start to read texts and readings they are provided with.  
H5: First grade primary school pupils tend to draw a parallel between the processes of reading and learning to read, while not the joy of reading.

Research results

Favorite free time activities

The first question of each interview was an enquiry upon the favorite free time activity of the pupil. The purpose of this question was to break the ice and dissolve the tension, thus children could open up and describe their favorite free time activities in great detail. Based on the responses, 11 categories were distinguished. It is important that pupils were allowed to list several activities. Their answers are illustrated in Graph 1.
The majority of first grade primary school pupils in Vojvodina prefer playing outside (55.8%) to any other free time activities. The second favorite activity is playing on a technological device (36.7%), while the third one is situational games (34.5%). The various activities spent outside include playing in sand, climbing trees, hide-and-seek and running around. The category of technological devices include computer games and watching television. The category of situational games refers to role playing with dolls. The least favorite free time activities are playing board games (0.7%) and listening to music (0.9%). Based on the responses, it can be concluded that children of the age group under analysis prefer doing activities that they can acquire independently. Other activities, such as playing board games, listening to music, relaxing, doing handicraft (i.e. the least favorite free time activities) require parent-child co-operation, thus it can be assumed that either parents do not spend much time with their children or the family set the example for the children of occupying themselves on their own, however they seem not to enjoy it from some reason as it is not a common activity among their peers. The subject of favorite free time activities is worth further researching on in a separate study.

The reading habits of pupils

Graph 2 demonstrates the reading habits of pupils under analysis. The respondents were individually asked whether they read at home (first group of columns in Graph 2), if they still read at home or not any more (second group of columns in Graph 2), or who reads/used to read to them at home (third group of columns in Graph 2).
The 44.5% of the first grade primary school pupils of the 2015/2016 academic year did not partake in any tale reading activities at home, only 24.5% of children read often at home and 30.9% of them were read to by their parents. The 24.1% of pupils are read to at home nowadays (however, it can also be assumed that these activities are reading out tales that are for homework for the sake of practice), while the majority of pupils (31.2%) report that they used to be read to. It is usually their mother who reads to the pupils (84.5%), only in 8.1% the father or in 6.1% the grandparents (the statistics of siblings reading to the pupils cannot be evaluated since in several families, it is the older sibling who participated in this research or the respondent was an only child). To summarize the findings, the majority of first grade primary school pupils never read at home (44.5%), the 30.9% of pupils were rarely read to or they used to be read to, however their parents stopped doing so (31.2%).

### Pupils’ reading skills

In order to provide accurate data for further research, it is crucial to survey what literary text types are appropriate for first grade pupils as well as their reading skills. Pupils read out the same text from the ABC Reader 23 they were already familiar with. Special attention was paid to the timing of interviews, namely data collection was performed in spring by the time pupils had already acquired all the letters of the alphabet and disposed some level of reading skills. Graph 3 demonstrates the findings of pupils reading skills.

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Considering the level of reading skills, the majority of first grade pupils (38.6%) of the 2015/2016 academic year are on the level of word reading. The 36.3% of them read by syllables. By the end of the first academic year, 13.9% of pupils can read fluently, while the ratio of pupils who cannot read or only by letters is 5.2% and 6%. The majority of pupils participating in this research read without any errors (58.9%), or with a few errors (30.4%), and only 10.7% of them read with a lot of errors. However, the majority of pupils are still not skillful enough in reading as the 61.3% of them still prefer reading aloud. The second segment of Graph 3 demonstrates the ration of reading habits within the family, according to which pupils never or rarely (or only used to) read at home. The fourth segment of Graph 3 proves to confirm the fact that 6-8-year-old pupils read at home alone or without the assistance of their parents. Despite all the above mentioned circumstances, the level of reading skills among pupils in Vojvodina is rather satisfactory as by April and May the majority of first grade pupils were on the level of word reading.

Pupils’ favorite tale types

As it is rather challenging to reveal the favorite tale-types of primary school pupils since they have just begun reading acquisition and are in the process of integrating into the new social milieu, i.e. school system, thus the design of Graph 4 was preceded by a thorough and attentive process. Graph 4 demonstrates the various categories of tales preferred and mentioned by the respondents. During data collection, pupils told their favorite tales as well as elaborated their favorite part of the tale and explained why they loved it or what other types of tales they fancied. Graph 4 shows the various categories pupils elicited.
Based on the data elicited during the individual interviews, it can be concluded that the 36.3% of 6-8-year-old pupils prefer animal fables the most, their second favorite type of tales are fairy tales and folk tales (26.3%). Only 10.3% of the respondents like combat or adventurous stories, while even less (8%) like encyclopedias. Considering stories upon children is the least favorite type of tale (5.3%), however poems and other texts were evaluated more positively, namely 7.6% and 6.1%. The latter has not received the category of literary text, since texts such as coloring books were put into this group. In light of this, 6-8-year-old children in the 1960s had a considerable demand for tales. Readings of realistic plot (i.e. less fabular) such as combat and adventurous as well as stories about children’s lives were not subjects of interest for 6-8-year-old children, since only 16% of first graders liked these types of tales, which rose among second graders to 24% considering readings of realistic plot. In the 1960s the combat and adventurous readings were more popular among boys is second grade (from 5%, it increased to 22.6%), while female readers preferred child stories that proved to be of interest among 18% of girls in first grade, and 21.4% in second grade. The interest towards fairy tales did not decrease according to Toth (1967), on the contrary, it even increased among boys from 31.4% to 37.5% in second grade. However, the interest towards fables decreased.

Based on the above discussed results, it can be concluded that from the perspective of fifty years the interest of 6-8-year-old children towards fairy tales did not decrease. Nevertheless, statistical data should not distract us, as the real question is whether 21st century children do not partake in any reading experience at home, to what extent are they familiar with encyclopedias, combat or adventurous stories. The textbook repertoire of the school system is deliberately not mentioned as it has already been discussed in a previous study (Vass 2017a). Namely, none of the ABC readers in Vojvodina dispose of such types of texts. Thus, the majority of children drew a parallel between fairy tales, folk
tales, fables and literary texts, which is positive as long as the following two graphs (Graph 5 and 6) are thoroughly analyzed.

**Pupils’ favorite types of tale-heroes**

The analysis of pupils’ attraction towards tale-hero types was based on a consciously designed and well-thought-out process (Vass, 2016b) leaning on tale-hero illustrations. Among the illustrations, two types of tale-heroes were present: folk tale hero types (such as, wolf, haversack, young queen, young king, dragon, etc.) and hero types “different” from folk tales (bicycle, vampire, meerkat, pirate, soldier, etc.). Pupils familiarized with each illustration and could also make up a story with the characters. Those who refused to do so were requested to select their most favorite heroes and elaborate what roles they attributed them with (main role, supporting role, evil, other roles). Graph 5 demonstrates the statistical processing of the data.

**Graph 5: Pupils’ favorite types of tale-heroes**

Data analysis shows that the most favorite hero-type among 6-8-year-old pupils are magic steed (48.5%), witch (41.3%), dragon (40.3%), vampire (40.1%), death (36.1%), princess (33.7%), fox (29.5%), wolf (29.7), soldier (25.9), dinosaur (25.7%), pirate (25.6%) and snake (22.2%). The data provided above are rather versatile, thus the aspect of gender has been added to the analysis (Vass, 2017b). According to the gender examination, there is a gender based taste differentiation, to be specific female respondents preferred folk-tale hero types (such as, fairy, young queen, dragon, magic steed, rabbit, mouse, horse) and only two hero types did not fall into this category (school girl, cake); while male respondents proved to be more interested in non-traditional hero types (such as,

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24 The 32 illustrations were designed and drawn by Renata Somorai, a student of the University Of Pecs Faculty Of Arts.
meerkat, dinosaur, death, bicycle, pirate, soldier), and considering traditional tales, characters such as a wolf and snake were also popular among male respondents. Interestingly, the dragon character was not attractive among male, but among female respondents. I assume that the explanation for this phenomenon lies in the recent alteration of the dragon’s role in tales, namely they used to be evil in traditional folk tales, however as Trencsenyi (2014) also argues their role in tales has transformed. Boys prove to find it more difficult to identify with the tamable dragon, instead they opt for the preference of wolves, pirates and soldiers.

It is also worth looking into what roles are associated with the illustrated characters. Special focus is on the evil boy, girl, flower, magic steed and snake, wolf, dragon, witch, vampire, pirate and soldier in leading roles. These responses may also refer to the interest of children in tale-heroes that challenge traditional stereotypes.

Based on the data analysis, one can doubt that the majority of children prefer fairy tales and fables to combat and adventurous stories.

 Literary texts versus motion pictures

The research also aimed to reveal whether respondents preferred literary texts (listening to or reading tales), or motion pictures (watching cartoons or movies). Graph 6 comprises their responses.

According to the responses, the majority of 6-8-year-old pupils prefer motion pictures (63.2%) to literary texts (36.5%). The latter groups were further requested to explain why they preferred tales to motion pictures. A few of their responses are elicited: “It is good to read, because I am able to. My mother also tells me so.”, “It is important to read in order to acquire reading.”, “There are a few funny tales, but most of them aren’t. Unfortunately.”, “Sometimes I come across parts of the text that are interesting.”, “If I read a lot, I learn it by heart and I get a good grade.”, “I like reading, I improve and my mother is also happy.”
Conclusion

Based on the research data, the following questions might rise: if 6-8-year-old pupils like fables, folk tales and fairy tales the most, why do they show preference for tale-heroes that are different (in their outlook and inner features) from characters of fables and folk tales. Why do these pupils prefer motion pictures and cartoons to literary texts if their level of reading skills is word reading or fluent reading?

The answer is probably that the pupils participating in the research associate reading with the feeling of success, achievement obligation and living up to their parents’ expectations (as pupils’ answers on why they liked reading confirms the assumption). Reading tales is associated with the task of reading acquisition as well as scholarly achievements and not with emotional attachment to reading. Exciting heroes for children can be seen on television or cinema screens, while these heroes are different from the ones in folk tales or characters from folk tales that dispose of different features from traditional tales. Such expectations could be met by encyclopedias and contemporary tales, however, supposedly the majority of pupils participating in research did not come across or were not introduced to such texts as they do not partake in reading activities at home and no effort is made by schools to widen the repertoire of textbooks.

In conclusion, the research hypotheses are confirmed, as first grade primary school pupils in Vojvodina show preferences for contemporary literature and natural scientific texts as well as contemporary poems (H1); characters “different” from traditional ones (H2) and characters of folk tales who dispose of different features (H3). Their literary taste is remarkably influenced by movies and cartoons that impersonate heroes that they fancy while they fail to experience such emotions during reading (H4). Pupils associate the process of reading with reading acquisition and not with positive experiences (H5).

References


Handler Spitz, Ellen (2015): The Irresistible Psychology of Fairy tales

Harper, Amelia. 2009. Teaching Your Child to Love Reading. The Old Schoolhouse Magazine, LLC.


Complex competency development with augmented reality supported digital storytelling

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Proposal information

In this paper we investigate the potential of combination of two methods: augmented reality and digital storytelling.

Advantages of digital storytelling in education is well-known. There are several studies examined its applicability and gave an account of successful implementations in classroom environments and some different projects (Feher, 2008; Banaszewski, T. 2009; Di Blas, et al., 2010; Di Blas-Ferrari, 2014). Results of Di Blas et al. reinforce the view that „that students do achieve a number of benefits, both direct (i.e., curricular, traditional…) and indirect (i.e., non-curricular, non-traditional, like, for example, a professional attitude). Digital storytelling supports deep learning and constructivist learning methods as well (Barett, 2006).

While digital storytelling as a method is more than 20 years old, there is a growing attention for new augmented reality applications in educational settings between researchers as well as teachers and students. (Augmented reality applications are widely spread in different areas engineering, computer games, military, medical applications, or

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PR-environments, however educational applications are in their’s infancy. (Dunlevy, 2014; Dunlevy-Dede, 2014)

According to Azuma (1997) "Augmented Reality allows the user to see the real world, with virtual objects superimposed upon or composited with the real world. Therefore, AR supplements reality, rather than completely replacing it. Ideally, it would appear to the user that the virtual and real objects coexisted in the same space…"

There are several types of AR existing:

- marker-based (QR-code for example)
- location-based
- projection based
- superimposition based
- outlining AR.

In our project we have used mainly marker-based implementations.

Bozkurt (2016) identified several education and learning objectives with the use of mobile augmented reality. One of them is similar from our purposes: "Engage, stimulate, and motivate students to explore class materials from a variety of differing perspectives".

The aims of our research were to identify the benefits of mixing methods for purpose of supporting constructivist learning approach; to identify the benefits of using AR in different subjects; to find out how to implement a combination of digital storytelling and Augmented reality in real classroom situations, with different age groups of primary school students.

The research framework of study was build of action research principles (O’Brien, R. 2001) and constructivist learning. Our mixed method could be an ideal way for self-expression of students and help them to communicate with others in international projects (for example E-twinning). They will be able to communicate and collaborate with pupils all around Europe with the language of digital storytelling.

**Methods**

The study conducted last year school term (10 months, 2015-16) at Puskas Primary School in Budapest. A pilot project was run with 5 groups, two groups Grade1 (n=17 and n=12), two groups Grade5 (n=28 and n=12) and one group Grade7 (n=28). 10 teachers were involved in the project. In our action research we applied different types of tools for development of students’ skills and evaluation of the process.

For creating digital stories students used drawing applications (Paint, GIMP, KidDoodle, Lapoda Multimedia – developed by Hungarians etc.), sound-recorder, digital camera, smartphone, digital scanner. After finishing work with stories, they needed to convert
them into augmented reality. At this second stage they use at least two AR-applications: Aurasma Studio and Landsca AR. They uploaded their works (ie. digital stories) to the channel of their school or community and shared with others.

Before the start of this stage of the pilot project we carried out a systematic literature search about two main topics: augmented reality and digital storytelling. The methods implemented by researchers during and after the pilot: observing students activities during activities, questionnaire for students, questionnaire for teachers (both are paper-based, 4-point Likert-scale, some open-ended questions), short interviews with teacher participants. Based on these sources we analyzed the motivations and attitudes of students according to augmented reality apps, and collected opinions and suggestions of their teachers.

Conclusion

In this lecture, we present an overview of action research and pilot project regarding to complex development of competencies with augmented reality based digital storytelling.

Some results of the first year of the project:

- more than 80% of students enjoyed new tools and methods, they found them very interesting, useful and motivating.
- according to the answers of participating teachers they found a lot of positive outcomes and only few difficulties.

The benefits mentioned by educators in the interviews were the following:

- visual material are more adequate for young students,
- students were very motivated with using and created augmented reality applications they had never met earlier.
- the combination of methods has a huge motivational potential for both young and older students, partly because auras (ie. augmented reality applications) created by students can be share with wider audience outside their school.

Some drawbacks mentioned by educators in the interviews were the following:

- creating stories and converting them into AR require much more time as they have in the classroom,
- this way the complex method is applicable mostly with project-based learning and homework,
- the technological issues (wifi-access for example) could be barriers of successful projects.

To summarize our findings: we draw conclusions regarding to the chosen methods and found that Augmented Reality Supported Digital Storytelling is an appropriate method for
development of several competencies (digital, reading, writing, communication) of students. It provides support for group-work and project-based learning as well. There is a need for further research to create and implement an evaluation tool to strengthen our findings.

**Keywords**: ICT, Augmented reality, mobile application, competency development

**References**


'Let Us Develop Together!' - A Curriculum Development Process to Improve Scientific Literacy of the Students at Secondary Vocational Schools in Hungary

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Proposal information

The topic of this paper is the reform of science education in Hungary, started with secondary vocational schools. Teachers of Biology, Chemistry, Geography, and Physics were really shocked by the ministerial decree which decreased with 40% the total number of the scientific lessons in the whole educational period of the vocational education last August. A new subject (Science) was introduced in 9th grade in secondary vocational education at the same time. The main targets of this subject are to improve the students’ scientific literacy and skills, to support them in becoming responsible citizens, and to help them to live a healthy life. There are 108 lessons – all in a single academic year - to attain these targets. In grades 10-12 in secondary vocational education one scientific subject is taught (Biology, Chemistry, Geography, or Physics), as the theoretical basis of the vocational training depending on the profile of the school. The teachers who have to teach this new Science subject are trained for and are experienced in teaching one or two scientific disciplines, but they are not qualified to teach complex science. The Hungarian Institute for Educational Research and Development (HIERD) was appointed to develop the science curriculum for grade nine of secondary vocational schools in cooperation with some scientists and teachers. The curriculum has to improve the scientific literacy of the students by active learning about those topics which are closely connected to their daily life.

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The main questions and tasks of this curriculum development process are the following: Which complex features of nature are connected to the daily life of the students, allowing for experimentation? Which skills should be improved by learning this subject? How can the teachers trained in special disciplines manage the learning of Science? How should teachers be supported to facilitate active learning? The development process is based on the following principles: The new science curriculum has to be based on the national and international experiences, and should take the expectations of different stakeholders into account. For the success of the development process, it has to be led by professional curriculum developers, who have to cooperate with practitioners. Thematic ideas and methodological suggestions have to be tested in practice, and the reflections of the teachers have to be used in the finalization of the themes and methods. The new curriculum should be flexible to fit the varied possibilities and needs of the teachers, students, and schools. The development process has to be communicated continuously. The core element development process is the action group led by the Curriculum Centre of HIERD. Educational researchers and curriculum developers, experts of school improvement, textbook developers, and IT-experts are represented in this group, also linked to a group of teachers, playing different roles. They can tell their opinion and needs to the development experts, they can share their experiences at the National Public Educational Portal, they can share their views with each other and the developers in a facilitated online forum, and some of them can develop some elements of the curriculum. The development process is supervised by a board, in which the Hungarian Academy of Sciences, the Ministry of Education, three different universities involved in initial and in-service teachers training, the Chamber of Teachers, two professional science associations, and the chief management of HIERD are represented.

Methods

Situation analysis: The first step is an overview of the most important national and international trends and experiences of curriculum development and teaching of science. The next step is studying the learning environment of science teaching in secondary vocational schools and detecting teachers’ opinion, their attitudes and needs in teaching science. The results of desk research are to be summarized in an essay. Questionnaires for teachers and school leaders are the instruments of this part of the development process.

Conceptual framework: A small group of experts creates a skeleton of the curriculum (targets, basic ideas, skills to be developed, suggested topics, and possible methodologies). The knowhow of different learning theories and projects, also the literature lessons for curriculum and skills development (e.g. Inquiry Based Learning/IBL, Strategies for Assessment of Inquiry Learning in Science/SAILS), (e.g. Trilling & Fadel, 2009; Fazekas & Halasz, 2014; Gordon - Győri, 2002) and the experience of those alternative schools, where science has already been taught are used for this work. After valorisation of the framework, some detailed examples and a template for will be worked out.
Preparation of the detailed programme: On the basis of the accepted curriculum framework, professional developers and the teachers who are selected by an application, create the modules of the curriculum in a common format, using the template. The modules will be finalised after considering the reflections of some practicing teachers.

Continuous communication: Different tools (thematic meetings, leaflets, a webpage, newsletters, and a conference) are used to inform teachers about the milestones of the development process and an online forum is operated to share their ideas and suggestions.

Online teachers’ manual: Supporting teachers is one of the core elements of the successful implementation of the intended curriculum. The teachers’ manual, should be produced by the end of this academic year, incorporating a range of practical information to help teachers. It will contain the conceptual framework, the skeleton of the curriculum, and the detailed programme of some learning units. The online format makes its continuous update easy.

Improving a teachers training programme: An accredited teachers training programme, organized in blended form, will provide theoretical and methodological support for the teachers in need.

Conclusion

The situation of teaching natural sciences in vocational secondary schools in Hungary has changed so dramatically that it has to take on absolutely new basis. As the main target of Science is the improving the scientific literacy, the new curriculum should focus on the skills to be developed (such as thinking skills, inquiry skills, and 21st century skills) and the facilitation of active learning. The topics of the curriculum are only tools for skill (and personality) development, they should be motivating for both students and teachers, and should serve for active learning. The topics have to be problem-centred. Teachers have to possess different methods of active learning (e.g. experimental learning, inquiry based learning, debate) and ways to improve the scientific skills. Teachers with different experiences, motivations, attitudes, and needs should be able to tailor the curriculum for their situation. A wide range of complex scientific topics connected to daily life and possible methodologies to study them could support the implementation, offering both a general framework and professional autonomy. A teacher training programme, a teachers' manual, and supporting the horizontal learning of teachers are equally important elements of the implementation and the continuous development of the programme.

Keywords: paradigm shift, curriculum development, active learning
References


Volunteering motivations of higher education students in a Cross-Border Central Eastern European Region

Valeria Markos

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Proposal information

In our research, we examine the frequency and distribution of volunteering of higher education students by country and discipline as well as what motivation types of volunteering which exist among students. We examine as well what kind of voluntary groups be formed among the higher education students.

According to researchers (Cnaan - Amrofell 1994, Wilson 2000, Dekker, Halman 2003, Handy et al. 2010) the volunteering has four specialty. These are the following: The activity is voluntary, non-obligatory, carried out by people’s own choice and free will. The voluntary work is free of charge, thus the paid work can be disqualify. Volunteering is producing material, intellectual goods or services for the benefit of others or for public good. Volunteering is usually done in an organizational context.

According to Czike and Bartal (2005) there are the traditional and modern type of volunteering. The traditional volunteering is characterized by altruistic values such as helping the poor, the importance of religion and faith, moral duty and belonging to the community. The modern type of volunteering is characterized by gaining work experience, personal growth challenge, career development, spending leisure time in a useful way and making new friends. According to Stefanescu & Osvat (2011) nowadays the motivations of volunteering among the young generation mostly instrumental (modern type of volunteering) such as important of making friends, meeting people with similar interest, spending leisure time, gaining information, developing and practicing

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skills, enlarging human capital, getting a job more easily, learning and practicing sports and cultural activities. But nowadays the mixed motivations are also appear among students, where helping others is also important for students with new motivations such as helping others is also important for the students with modern motivations. In addition according to Handy et al. (2010) turn up the new types of volunteering among higher education students. This is the career-related resume building volunteering for example, they do voluntary work, because they can put the experiences in their CVs. In Hungary the most popular volunteering areas are the followings; religious, leisure, recreational, healthcare, youth, educational, and cultural organizations. The traditional and modern type of volunteering are also common (Bartal 2010). According to the literature (Voicu and Voicu 2003, Praxton et al. 2014) the religiosity enlarges the chance of volunteering and the religious practice (eg. regular praying) has a positive effect on volunteering. The importance of helping others is more popular among religious people.

According to some researcher (Hesser, 1995; Eyler et al., 1997; Astin& Sax, 1998; Mabry, 1998) volunteering among higher education students is very important factor because it can be an indicator of student learning outcomes. Voluntary work has a positive effect on students’ academic achievement and it can develop competences that are necessary in the life for example active citizenship, decision making, leadership ambitions and facilities, social self-confidence, critical thinking development, problem-solving skills, analytical skills, interpersonal and communication skills, conflict resolution skills, team work skills, increased knowledge about other cultures and ethnicities, those personal values which help a better understanding the community, goals and attitudes changes, greater tolerance towards other groups and individual changes in social values.

**Methods**

Our research is based on the serial quantitative research conducted by the Hungarian Center for Higher Education Research and Development. Data were gathered in the border regions of four Central Eastern European countries, namely Hungary, Romania, Serbia and Ukraine. We examined those Central European higher education institutions, which have high rate of non-traditional (low status, rural, minority) students.

The asked full-time students was state-funded and full fee-paying students. We asked the students at the beginning and the end of the training to reach all levels of training. We selected proportional sample from the institutions so the Hungarian sub-sampal is bigger than the other cross-border Hungarian sub-sample. We asked 1792 students and we used the Institutional Effect on Students’ Achievement in Higher Education (IESA) database.

The examined variables were the following: Dependent: Have you been a volunteer during your university studies? If so, what motivated you (20 items)?

Independent variables: the country of the higher education institution and disciplines.
To examine the motivation of volunteering we used 20-item Likert scale variable which is based on Clary et al. (1998) Volunteer Functions Inventory (VFI). Because of the length of questionnaire we should reduce the number of items to 20-s. According to the OECD we classify six disciplines groups, these are the followings: natural science, engineering and technology, medical and health sciences, agricultural sciences, social sciences, humanities. 

To examine the research questions, quantitative data are used. We conducted the data-analysis with the SPSS program. We used cluster analyses and crosstabs.

**Conclusion**

According to our results the majority of students in our sample has mixed motivation (traditional and modern types of motivates were also important). We formed five student volunteer groups by cluster analysis, these are the followings: (1) postmodern, (2) weak altruistic dismotivated, (3) eminent, (4) volunteers of antivolunteering climate and (5) the helping new type of volunteers. Most of the students belonged to the “volunteers of antivolunteering climate” group. This group is important to help others, but also important them their own professional development, gaining experience and ability enrichment. They did not want to put this voluntary activity in the CV. The reason of this could be, that in Central-Eastern Europe the employers are not interested in that what voluntary work experiences has the young people, when they go to a job interview - as much as in western countries. The volunteering helps to enter to the labour market to the young people and they need this because of the high unemployment rate in Central and Eastern Europe.

Among the disciplines the “volunteers of antivolunteering climate” group is outstanding in each discipline. The rate of those students who learn natural sciences and those students who learn agricultural sciences are also high in the so called “weak altruistic dismotivated” group. The reason of this could be that these students are not keep in touch with humans during their studies and they deal with natural phenomena or agricultural activities which are not necessarily focus on the people. So these students try to help to people in their free time.

**Keywords:** volunteering, higher education, volunteering motivations

**References**


Bartal A. M. (2010): Elnek köztünk boldog emberek is... - a magyar onkentesek es nem-onkentesek jellemzői a 2008 evi Europai Ertekrend Vizsgalat tukreben. In Rosta Gergely - Tomka Miklos


Book Review

Erzsebet Kazarjan (2013): Higher Level Vocational Training and mobility, or the morals of a research. [Felsofoku szakkepzes es mobilitas, avagy egy kutatas tanulsagai]. Eotvos Publisher [Eotvos Kiado], Budapest.

Barbara Szabo

Higher Level Vocational Training and mobility, or the morals of a research. The topic, which was chosen by Erzsebet Kazarjan, deals with important questions.

In the last ten years, numerous studies, articles and national researches have been published in connection with higher level vocational training. Theoretical works focused on the development and continuous change of the training, while empirical studies concentrated on the investigation of students’ expectations and motivations as well as on the issue of the labour market in relation to the training. In the last few years, more and more students chose higher level vocational training either as a full-time or as a correspondent student. Beside the number of applicants, we can state as fact that, by now, the higher level vocational training has gone through several changes. In 2011, the new Higher Education Act was finalised and accepted. The changes in the new act also affected the higher level vocational training system. Since September 2013 higher level vocational training programmes have been started in those higher education institutions which provided this type of training in the form of basic or five-year education programmes with possibilities of further education as well as which gained eligibility for starting these training programmes and its specialisation.

The topic of short-cycle higher education (FOSZK), earlier higher vocational education (FSZ-2003-2013) and accredited higher vocational education school system (AIFSZ 1998-2003) is internationally studied. The formation and the development were observed by several studies. Comparative analyses also dealt with the characteristics of European countries (Kirsch et al., 2003; Dobbins-Knill, 2009). In our country, we can divide the researches we have done over the last 20 years into two groups. We observed that the researches were focused on students’ composition, socio-cultural background, learning outcomes and motivation, (Hrubos, 2002; Pusztai et al., 2003; Karsai, 2011; Kasso-Farkas,

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2012; Szemerszki, 2012.) but on the other hand there are some researches in the same field which also studied this involving the acceptance, value and future plans of the labour market (Fehervari-Kocsis, 2009; DUF, 2009; Penzes et al. 2011; Szemerszki, 2006).

In Hungary, the beginning of short cycle higher education was in the mid-1990s, when the pretension and the demand for making a new educational form were strengthened, beside the university sector, which, contrary with post-secondary education, is more suitable for the labour market. Short cycle higher education gained its final place in the training structure when the Bologna system was introduced in 2006.

The researches in the topic chiefly dealt with the students and labour market outcome. We can consider the author's choice of topic as unique because she researches and makes inquisitions on this topic as first. Erzsébet Kazarjan's book summarises the theoretical and empirical parts of her thesis for the doctor's degree in 163 pages range.

The uniqueness and the singularity of the tome are in the special choice of topic. We can divide the structure into 6 big unities. In the theoretical unity, besides the home stories, we find an international glancing out. Readers can be familiar with the British, French, Belgian-Flemish, German-Austrian and the American system.

Besides the characteristics, the legal and institute system of the home system, it gives some useful pieces of information about the frame of the training. From the point of view of the speculation, there are two important topics and concepts, which are outstanding right in the content. These are the Higher Level Vocational Training pedagogy and the mobility pedagogy.

The 2 topics are seen in a brand new approximation. The first summarises the learning and educational strategies, and the concepts, while the mobility pedagogy is walking around the topic of mobility, mentioning the mobility of students studying in advanced studies. The author describes these parts of departure right in the recommendatory.

„Both in psychology and pedagogy blew over an emotive revolution, which aimed the attention to the effective learning is not just reproduce knowledge, and function of cognitive skills, but as an attitude of competence, they come into the spotlight, as well.” (Kazarjan, 2013, 9).

This way, the social environment of the person, the existing skills and motivation, and also the ambitions have an effect on the school performance. The most important message of the theoretical chapters is that life-long learning, and self-regulative learning should act as the part of the so-called old typed school system education.

The main aim of the research showed in the book is to examine what conditions play important role in the self-regulatory learning of students in practice-oriented training, besides it shows what does the independent educational discipline mean. In the theoretical chapters of the book, in tertiary vocational education deals with the
pedagogical aspects of higher education vocational education and training, which takes
different education strategies in terms of educational science into account. On the other
hand, it explains the importance of life-long learning; it discusses questions on of youth
sociology and adds psychological questions to pedagogical questions.

The questionnaires and focus teamed inquisitions taken at Schola Europa Vocational
Academy, which has examined students of Leonardo programme among 2006 and 2011,
concentrated on self-regulation, planning, schedule making, and even communication
skills as well.

„Which skills do a youngster need to set off? What do they learn in these field trips? Who
learns the most? What other moveable sources do they have? How do they rate the road
correlate to their own skills and the difficulties of the tasks?” (Kazarjan, 2013, 9).

The book makes an attempt to which differences students went through, who took part in
scholarship programmes of Higher Level Vocational Training schools, especially focused
on the improvement of self-regulation and communication skills.

Erzsebet Kazarjan has been working on the use of a variety of test methods with the
involvement of a control group and a controlled study. The students who participated in
the Leonardo program were examined each year during a research period (2006-2011)
before leaving and returning home. The self-regulation, planning, scheduling and
communication skills on paper-pencil based questionnaires were filled by self-confession.
In the research, the 13th and 14th-grade students, who did not participate in the mobility
programme at the Schola Europa Vocational Academy completed the same questionnaires
as a control group. The questionnaire for the results of the experimental group also
included a metaphorical questionnaire, analysing the diversity of source metaphors by
analysing content analysis. Besides the given methods, the researcher has made a general
survey among students, in which he examined their motivation, further educational goals
and employment opportunities in order to get more familiar with the background of
students who study in vocational training. In the 2010/2011 academic year, students
participating in the mobility programme took part in a focus group interview during the
research, where the purpose of researching was to release the experiences gained during
the research.

The result of the research verifies that among students, who had weaker skills at the
beginning, than the average, can improve the most, so the programme is the most effective
for them.

The author of the book built his research on 5 basic theses. On one hand, he supposed that
the mobility students show development in planning, scheduling and self-regulation, and
this development is not a spontaneous process, it is due to participation in the mobility
program. For the third thesis, the researcher assumed that those, who are participating in
foreign studies inside the programme before giving answers to the examined questions
(planning, scheduling and self-regulation) didn’t have more advanced skills compared to their 13th-grade counterparts. In thesis number 4, Kazarjan has made progress in the field of communication skills among the participants in the mobility programme, as students are so-called forced to enforce their own interests. As for the improvement and effectiveness of the study, it was assumed that the results of students, who are learning abroad significantly improved in grade 14 compared to their 13th grade, which is clearly due to the mobility program.

Some parts of the author’s preliminary hypotheses proved that the skills of students attending the Leonardo programme developed greatly, and even with the expansion of professional knowledge, studying abroad has also increased motivation and self-efficacy, which, - as the researcher says - a prerequisite of lifelong learning. According to the author, the research carried out among students of vocational education can contribute to the development of the pedagogical-methodological culture of vocational education, the utilization of its knowledge of higher education, and the research of the triple unit of higher education - mobility - self-regulating learning can contribute to the efficient operation of a new type of training model. By finding the correct teaching methods or by strengthening, it would be possible to strengthen a practically oriented short-cycle training form in a domestic education system.

In view of the book’s style, – though the frame is well structured and methodically divided – it’s readable. Sometimes it differs from the title of the chapter. It makes it more readable, then again it makes the posterior understanding more difficult.

It’s worth to mention the representation of the richly used graphs and charts, which demonstrates the current elements in every main junction. For example in the part of the international glancing out, we can see the education system of the given countries, the model of the pedagogy’s basic relationship, or the dimensions of learning.

In the analytic part of the research, the author uses the charts with excellent sense and system approach, which makes the general understanding easier.

The book gives a great opportunity to see into the system of Higher Level Vocational Trainings and be more familiar with the chances of mobility programmes. At the same time with the book’s publishing, it’s not just the name, which has changed, but there were some changes in the content as well, so it would be deserving to continue the work also in the renamed system.
**Book Review**


**Gabriella Pusztai**31, **Katalin Pallay**32, **Orsolya Joo**33, **Katalin Cseke**34 & **János Farkas**35

**Two Gap-filling Books on Non-immigrant Minorities**

In our book review, we present two books that deal internationally with a topic that is examined by literature regarding national minorities. Let's see the authors of the gap-filling work first. Timofey Agarin and Karl Cordell, researchers of the nationalities of post-communist states, have presented several publications. Agarin is an instructor at Queen’s University in Belfast. His field of research is the social and institutional change in post-communist countries, with particular regard to the aspects of minority protection, migration and NGOs. His investigations primarily seek to demonstrate the impact of national identity, power relations and ethnic conflicts on the nation-state institutional system of the post-communist region. Cordell is a professor of political science at the University of Plymouth, an editor of the prestigious Ethnopolitics journal, published by the Association for the Study of Nationalities. In his research, he focuses on minority politics in Central - Eastern Europe, especially on the development of Polish-German relations. The fruit of the joint work of Agarin and Cordell is the two volumes that address the issues of European minority rights and protection of minorities and the survival and transformation of the anti-minority heritage of post-Communist countries (Agarin &

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Cordell 2016; Cordell & Agarin & Osipov, 2013). Osipov collaborated with them as a member of the international research team at the European Center for Minority Issues (ECMI) when he published the book in 2013, dealing with the perspectives of European politics and society of ethnic diversity and autonomy.

**National minorities in Central-Eastern Europe**

In the last quarter of the 18th century, among the peoples of Central-Eastern Europe emerged a national revival process of historiography, i.e. the formation of modern nations in this area. The ethnic groups of the region stood at different levels of development regarding nation building, but one common point is that the so-called cultural nation concept had the most significant impact (Dobszay & Fonagy, 2013; Molnar, 2013; Romsics 2004).

World War I brought about a significant change in the lives of ethnic groups that had lived in a different empire (Austro-Hungarian Monarchy, Russia, Osman Empire and German Empire) structures until then. Following the Paris Peace Treaties, the principles of Wilson were not fulfilled, and such states, considering themselves nation states (Czechoslovakia, Romania, Serbian-Croatian-Slovenian Kingdom, later known as Yugoslavia), arose which were again many or multi-national countries. However, the state borders were rearranged to bring new minority communities to life. The general characteristic of the history of the two world wars is the progressive geographical, institutional, demographic, and social development of the state forming nation, which following the world conflict, was also observed during the second communist regime. In countries under communist influence, Moscow, besides the false implications of internationalism, in fact in the spirit of the consolidation of the Communist power, was ready to recognise the primacy of the titular nations of the region (Pusztai & Markus, 2017). The rights of national minorities could only be exercised within the framework of the State party.

After the change of regime, the countries of the region were freed from communism, but in many respects, the party-state practice of minority restraint continued. The political nationalism of the Central - Eastern European states (Czech Republic, Slovakia, Ukraine, Serbia, Croatia, etc.), which now gained independence, has set itself the goal of strengthening the dominant nation’s position. The population of these countries still cannot be called homogeneous nation-states because of their ethnic-linguistic diversity. According to this approach, "to determine the nature of the state not only the ratio of majority and minority is important, but also the behaviour of the majority, political self-determination and state-building strategy." (Romsics, 2004).

The growing political nationalism of the independent post-communist countries has, in many cases, encountered intentions of minority and nationalist interests intensifying their voices. In many instances, the educational, linguistic and cultural needs of minorities have found themselves in the hostile atmosphere of the post-communist countries which formulate state-nationalist goals. The EU accession has not solved the conflict between
the state-forming majority and the minorities. Brussels was in favour of the success of integration and gave way to the interests of the majority nation.

**The legacy of communism**

Assessing the minority protection of post-communist EU Member States, Agarin and Cordell emphasise that in their case the prevention and management of minority conflicts did not succeed. It is understandable how the states, as candidates for EU membership, have raised the false apparitions of their enthusiastic commitment to minority protection while in reality, they were reluctant to meet the standards of the EU accession. The authors emphasise that despite the fundamental political and economic changes following the change of regime, many problems of minority protection have not been reassuringly tackled. The authors present two striking examples of minority policies in Slovakia and Ukraine to justify their claim. The fundamental feature of the Slovakian nationality policy is the limited nature of minority representation, as a result of which minorities have become victims of the nationalist state power as in other Central-Eastern European territories. Most of Slovakia’s minority policy derives from the legally restrictive traditions of the Czechoslovak state, and the process of nation-state building undermined minority protection. It contradicts optimistic expert opinions according to which a democratic society automatically enforces minority rights without any external and internal pressure. The authors denounce this with Nedelsky’s view that the disadvantaged politics of the Czechoslovak period defined the assessment of the minorities in Slovakia after the change of regime.

According to the authors, the legally restrictive legacy of the communist era and the growing state nationalism also put pressure on the minority of the Hungarians living in Slovakia which became independent in 1993. After Trianon, the Hungarian elite of Upper Hungary lost its leading role, and in Czechoslovakia, between the two world wars, the minority rights were granted only on paper. The period between 1945 and 1948 was even more unfavourable when Eduard Beneš led Czechoslovakia declared the collective guilt of the Hungarian and German nationalities. Following the communist takeover of 1948, there was also a change in minority policy. The then leadership tried to promote equality coming from a socialist idea, but Stalinism lasting until the middle of the 1950s did not give way to minority law enforcement. The Hungarian Workers Culture Association in Czechoslovakia (Csemadok), founded in 1949, could not pass the boundary set by the state party. Slovakian nationalism increased as a result of the Prague spring of 1968, which was also accompanied by anti-Hungarian attitudes. It encouraged Csemadok to put the minority policy demands besides cultural ones on its flag. After 1970, Csemadok came under the authority of the Ministry of Culture, which reduced the role of the Hungarian language in education.

In the years following the change of regime and the declaration of Slovak independence, Hungarians in Upper Hungary enjoyed the hope of enforcing the proper minority protection rights. However, it soon became clear that harmonisation with the EU
accession standards did not bring any fundamental change to the achievement of these rights. The authors say that it was a positive development when in 2003 the only tertiary education institution in Slovakia, the Selye Janos University, started its operation. At the same time, the proper political presence of the Hungarians was damaged, as their representatives could only be delegated to the Pozsony Parlament from the Hungarian districts. Although the Slovak constitution adopted in 2012 provides mother tongue education, however, language rights can be allowed only by the 20% territorial concentration of the given minority and under the condition that it does not violate the sovereignty and territorial integrity of the Slovak state. The latter clauses allow arbitrary interpretation of minority rights. The authors conclude that there is considerable continuity between Communist Czechoslovakia and the practice of minority policy in Slovakia today.

Another example of the authors is Ukraine. The area of today’s Ukraine has belonged to several states over the centuries. The Mongol-Tartar throne, the Polish-Lithuanian Commonwealth (Rzecz Pospolita), the Habsburg Empire and Poland had the most significant effect on the historical development of Western Ukrainian lands. In Dnieper Ukraine, lying east of Galicia and Bucovina, the will of Tsar Russia, which owned the Crimean Peninsula from 1783 until then under Turkish rule, is prevailed. The rise of the Russian population has become significant through the continuous invasion of the Tsar government: in addition to the Tartars, the number of Russians in the Crimea increased, the industries of the formerly almost uninhabited Southwestern Ukrainian regions and their developing agriculture attracted more and more Russian workers. This latter phenomenon was only enhanced by the industrialisation introduced in the Stalinist times. As a result of the deportation of the Tartars after World War II, the Crimea became populated by mostly Russians.

After the change of regime, independent Ukraine defined itself as a single nation-state. According to data from the first and only Ukrainian 2001 census, 77.8 percent of the population claimed to be Ukrainians, while the proportion of Russians was 17.3 percent. The census identified a total of 134 ethnic groups. The authors point out that a significant increase in the ratio of the Ukrainian population is explained by the change of identity of residents born in mixed marriages. In the Crimea, the Russians represented 58.3 percent of the population, 24.3 Ukrainians and 12 percent of Tartars. The authors emphasize that in an ethnically diverse Ukraine the minority issue can be interpreted in international and domestic political dimensions as well. According to the study, these two factors in Donbass and Crimea were closely linked. As a result, the minority issue soon became a victim of party politics and power struggles. While the voting dominance of the Ukrainian-dominated parties was mainly related to Western Ukraine, the political direction of Russian orientation was more prevalent in Eastern and South-Eastern Ukraine as well as in the Crimea. Taking into account that the study on Ukraine was born in 2013, we can say that the authors have foreseen the conflict in Crimea.
Independent Ukrainian governments have not developed a comprehensive political strategy on minority rights. In the Soviet era, minority politics belonged to the Communist Party of Ukraine, but after the change of regime, this issue was still waiting for being settled. The winners of the Orange Revolution in 2004 created a National Authority for Nationalities and Religions (2006), but this was withdrawn by the pro-Russian President Vladimir Yanukovych in 2010. The authors sadly note that the Orange Coalition led by Yushchenko and the Yanukovych Party of Regions followed the practice lasting since 1991, which deprived minority policy as a tool for current political battles. Rival parties used ethnic mobilisation to maintain their position of power, leading to political instability and social conflicts. Despite the domestic and international commitments governing the Ukrainian minority policy, there was no efficient mechanism for minority protection. As an example, Ukrainian law does not provide a precise legal definition for terms such as "people", "nationalities", "national minorities" or "indigenous peoples". This situation is plastically manifested in the case of the Crimean Tatars returning home in an increasing number since the 1990s. The peninsula currently occupying Russian occupation had autonomy guaranteed by the Ukrainian Constitution (1996) until 2014. Their most important political body (Medzlis) and their native minority status, however, were not recognized by the reigning power, because of the opposition of the local Russians and Ukrainians. The authors of the study argue that the disorder of the minority issue also significantly contributed to the emergence of social distrust of the political elite in power.

**Minority policy after the political changes**

In spite of earlier homogenization policies in Central-Eastern Europe, some smaller and larger or more or less scattered communities are now living for which cultural autonomy would be a suitable institutional framework for the preservation of their identity. Meanwhile, in the region, the characteristic of the nation-state model and the state socialist period continues to define the state and public institutions as the almost exclusive property of the dominant nation, which protects the positions of the majority nation against minority needs. Nevertheless, many countries in the region have been involved in the development of individual or community autonomy solutions following the regime change (mainly Estonia, Croatia, Kosovo, Latvia, Macedonia, Hungary, Montenegro, Russia, Serbia, Slovenia and Ukraine). Today, a significant group of countries in the region refers to an individual or cultural autonomy, at least regarding legislation or policy documents. Since the collapse of the Communist regime, Central-Eastern Europe has undergone a radical transformation on the social, political and economic levels. The process was accompanied by the disintegration of the Yugoslav and Czechoslovak States. The emergence of these states, sometimes in the midst of severe conflicts, was essential to a national community, as some of them became nation-states for the first time and for the first time gained sovereignty for decades.

The authors point out that, while the peoples of the region were liberated from the trans- or multinational alliance, and at the expense of much suffering they gained independent
statehood or regained their national sovereignty (Poland and Hungary), Western Europe entered a post-national era. This statement explains many contemporary problems.

A minority without a home country

The authors, who have previously presented the situation of the Roma in an independent volume, focus on the ethnic diversity of the post-Soviet states, the member states of the European Union and its candidate countries, and discusses the particular situation of the ethnic group without a home country, the "Roma question" in several chapters. For two decades the nations of the region have struggled with the severe victims of political and economic transformation, and the Roma suffered the transition period in all countries. As we have seen, the EU has advocated the building of the state, which has become the primary goal in the integration process against minority protection. The strong assimilation policy of the communist regime of the time did not ease the acceptance of the Roma as a full citizen. In many countries, the exclusion of the Roma from the scope of minority policy is practically continuous, and this process is presented carefully and convincingly by authors of the volume discussed, for example in Ukraine, the Roma are not listed as a minority.

The Roma are in fact a concept of multiple origin and composition. In some countries, the Roma speaking the majority language dominate, for example, in Hungary four-fifths of the Roma are Hungarian native speakers. The authors illustrate the process of violent linguistic assimilation in the 1990s by presenting a model for education in Slovakia, which was initiated because they saw the reason for the retardation of the Roma in the use of the Roma language. The authors consider that the introduction of the pre-school classes actively contributed to segregation and questioned the right of the Roma to their mother tongue. At the end of the chapter, the authors have strong criticism of post-communist minority politics, saying that instead of looking for opportunities that contribute to the Roma-language education, the state more comfortably follows its communist predecessors in implementing brutal assimilation policy. It is also a case study of how the conditions imposed by the EU forced Bulgaria to revise and enforce anti-discrimination laws. With this, the EU acknowledged that Roma minorities are the victims of discrimination in the countries that are waiting for accession. In the light of EU accession negotiations, the question of Roma integration was even more pronounced. The exclusion of the densest ethnic minority population in the region from the arena of political life and the lack of appropriate representative bodies led the issue to European levels. We must add that the only Roma representative in the European Parliament was delegated by Hungary. There have been success stories in this area on a regular basis, and the Roma inclusion is included in more and more European documents. The attitude of European legislation is well demonstrated by the fact that countries also define the concept of Roma communities legally. Austria, Greece, Finland, Germany, Latvia, Lithuania, Romania, Slovakia and Sweden recognize the Roma as a national minority, while Hungary, the Netherlands, Poland and Portugal refer to the Roma as an ethnic minority. The Czech Republic uses both terms. Slovenia has a "Roma community", which is a political rather
than a legal category. In Italy, the Roma are only recognized as a minority at a regional level, while the Estonian government defines Roma as a separate community. The Roma are also citizens of Member States where the decisive role in political life is in the majority, so it was almost impossible to speak about Roma integration in European societies. The authors also point out that Roma interest protection later did not focus on the strengthening of minority rights, but instead turned its focus on combating discrimination, which is against the formulation of community identity, however, Roma integration has not achieved breakthrough success. The authors point out that the ultimate reason for this is that the European Union lacks the competences of minority protection.

The books by Timofey Agarin and Karl Cordell, which are here presented, attempt to analyse the minority policy of post-communist countries in the light of a hushed-up area. The books have an important message about the European Union and its future. They argue that Europe has left the member state policy in favour of the interests of the nation-state majority as a priority against the norms of European values, namely that the "return to Europe" did not improve the minority situation in post-communist states. In fact, there is no agreement among the oldest member states of the European Union on the rights of minorities, either. The book focuses on post-communist Europe, not the whole continent (suggested by the title in a somewhat misleading way), in which each state is formally European but in content national. Agarin and Cordell say that European integration and normative convergence are non-discrimination based ethnic diversity that failed to cope with the national model of state consolidation, democratisation and European integration in the EU.

References


It is obvious that every family, every student, every parent attended, attends or will attend school. All of us has any idea about the school and those opinions are different. We talk about the type of schools, the educational system, what subjects we like or not, or mention the teachers but talking about the problems is easier than look for, list and prove the advantages and disadvantages. Do we need more types of schools, new subjects, curriculum, more lessons? Whether does policy have to control the school? Are there more possibilities for the students to take part in extra programmes organized by the school? Perhaps the students get enough information for life but several questions wait for the reply.

The book on American educational pluralism by Ashley Rogers Berner shows the problems and points out the possible solutions.

The author’s main field is modern history, the history of modern social movements. Ashley Rogers Berner is Deputy Director of the Johns Hopkins Institute for Education Policy and Assistant Professor in the School of Education at Johns Hopkins University, and also Senior Fellow at the Center for the Study of Law and Religion.

The title of the study – No One Way to School – Pluralism and American Public Education – suggests that the theme is very interesting for teachers or policy-makers but the ordinary readers as well.

Not only in the Hungarian education but in American one student leave school without proper sketchy knowledge. In some countries, there are only one or two types of school, but in England, Belgium Sweden, and Canada (and so on) the parents and their children can choose from lots of type of schools. The offer of the school types in the Netherlands is huge, 35 different types of schools are available. The United States and Hungary as well do not provide enough possibilities to find the best school type for students.

On the other hand, Ashley Rogers Berner itemizes that there are factors, for example, the historical background, the role of the government or the culture, that help the reader to

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understand the importance of this study. In according to Ashley Roger Berner the structure of public schools must change, but the government has to follow and raise the “content-rich, subject-oriented liberal arts curriculum”.

The book is divided into seven parts. In the first chapter (Introduction) with five subsections the author shows the aim of the study, lists what reasons he started to deal with the educational strategy and theory, and why it is important to change the American educational system. David Brooks wrote in the New York Times that the American system is “one-size-fits-all” (p. 44.). For the Hungarian reader is useful that the author lists the American school types like charter schools, vouchers, in the following parts of the book we meet the other school types as well.

The next chapter – Educational Philosophies and Why They Matter – starts with a quotation by Charles Glenn: “[…] No aspect of schooling can be truly neutral.” This quotation is Berner’s starting point. The author examines the different opportunities of schools, in his opinion of formal education is positive: the schooling is instructive in some kind (but not all) of view. We can read the historical views about the school systems, the role of the Church (Protestant or Catholic ones), the separation of any type of religious schools and the state-funded schools.

In the chapter – Political Philosophies and Why They Matter – Berner writes the possible, existing figurations that can be found between the state, the individual and civil society. The author shows that the school systems are different in the different countries; sometimes it depends on the political status. In a totalitarian dictatorship, the schools are uniform, but in the liberal countries, there can be found as much type of schools as possible. Berner gives examples from Russia or Canada. In the subsection The Democratic Educational Theory we can read lots of opinions from several philosophers about the liberal, or religious aspects, later the evolution from political philosophy to educational models.

Reflecting upon the fourth chapter called American Constitutions and Religious Schools the author gives a historical background of the religious schools. Berner examines the Court’s rulings with several examples and says that the religious training can be a kind of pluralism.

In the fifth chapter, the author deals with the citizenship, achievement and accountability. In the very first lines, the author reminds the reader of the two aims of American public education – “to form democratic people, provide the academic and social capacities necessary for productive adulthood”. Berner shows and analyses the three phenomena, and the connections among them. In according to Berner the traditional schools work like bureaucratic agencies instead of organic communities. But how to lead the school system in the proper way?
The chapter called Limits of Educational Pluralism and How to Address They show the potential ways to the more colourful schools. But the chapter’s last sentence shows that there are positive and negative examples of democratic systems that can follow or refuse them. The author notes that teachers in the USA disagree in teaching methods. In this chapter, Berner gives several examples of the acts for instance in Massachusetts, methods which can be used in Montessori Schools or Catholic, Protestant, Jewish and Evangelic ones, and other, non-American schools. We can read about a very prickly question as well as sexual identity. The second part of this chapter emphasizes the school cultures, later we can read about the parents’ responsibility. Lots of them do not know the schools, but in the USA you can choose the school you want for your child. Parents need help to find the proper school.

The last chapter – Changing the Frame – is an overarching abstract or summary of the study. Ashley Rogers Berner stresses the most important facts with newer examples, we can learn the exemplary Finnish school system before the 1950s. The teachers were not trained at university. Later the government transformed the Finnish school system and nowadays the success is huge. Based on the score of the PISA (Programme for International Student Assessment) test Finland is the most successful country in Europe. The author notes the importance of teacher’s training, teacher’s preparation – the psychology and vocational skills are more inherent than focusing on academic content.

Ashley Rogers Berner gives lots of ideas about creationism, harm, equity, criticizes but admits the rigorous academic curricula. He defends the educational pluralism and helps us to keep on thinking the possibilities of the new educational system.

At the end of the chapters we can find the lists of meticulous notes, sometimes the author’s opinion about the cited lines which help us to understand the relations or connections. A useful bibliography shows the author’s commitment to the new way to school.

This extraordinary book should be required reading for everyone.
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