

Type of education and civic and political attitudes

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In addition to increasing cognitive skills and preparing students for the labour market, one of the core tasks of education is to prepare citizens for participation in democracy. Considering the ideal of democratic equality, it is important to know the degree to which civic outcomes of education are distributed equally. One feature of the education system that can lead to differential civic outcomes is tracking, that is, the sorting of students into different types of education. In this study, we examine the relationship between type of education (general/academic or vocational) and five attitudinal dimensions of civic and political engagement between the ages of 14 and 49 years in the Netherlands. By using panel data from the Netherlands Longitudinal Lifecourse Study ($n = 5,312$) and applying linear fixed effects models, we can observe the effect of a transition in the type of education on the within-person change in our outcome variables. The findings demonstrate that transitions in the type of education have little effect on intention to vote, trust in institutions or ethnic tolerance. However, students making transitions in general/academic education develop higher levels of interest in politics and generalised trust than do students in vocational education or people outside the education system. This point suggests that general/academic education fosters civic and political participation.

Keywords: civic and political attitudes; general education; vocational education; inequality

Introduction

Across education systems, students within secondary and tertiary education are allocated into different types of education to better accommodate students of different aptitudes and to smooth their transition to the labour market. Broadly, a distinction between general/academic (hereafter referred to as ‘general’) and vocational education can be made. General education prepares students for or entails university, whereas vocational education prepares students for work in occupational fields. The effect of this differentiation in education on cognitive outcomes of education is widely studied (cf. Hanushek & Wössmann, 2006; Korthals, 2015). In addition to increasing cognitive skills and preparing people for the labour market, one of the core tasks of education is to prepare citizens for participation in society (van de Werfhorst, 2017). Schools are considered important agents of ‘political socialisation’ (Niemi & Sobieszek, 1977; Campbell, 2006). Considering the concerns with respect to political

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polarisation and an increasing political divide between socioeconomic groups, it is valuable to examine the effect of type of education on civic and political engagement (Dalton, 2007; Levinson, 2012).

Several longitudinal country-case studies on the relationship between type of education and civic and political engagement have led to mixed findings. Some studies demonstrate that pursuing general education is more beneficial for developing higher levels of civic engagement than is pursuing vocational education (Eckstein *et al.*, 2012; Hoskins & Janmaat, 2016). Other studies find no causal relationship between type of education and civic engagement. These studies indicate selection as the explanation for different levels of civic engagement between types of education (Persson, 2012; Witschge *et al.*, 2014). These mixed findings could be the result of operationalisation differences and differences between education systems.

In this article, we examine the relationship between type of education and five attitudinal dimensions of civic and political engagement between the ages of 14 and 49 years in the Netherlands. We contribute to the literature by using a fixed effects design that neutralises time-invariant unmeasured individual-level differences and by examining a broad range of civic and political attitudes. The five civic and political attitudes that we examine are intention to vote, interest in politics, trust in institutions, generalised trust and ethnic tolerance. Based on the curriculum, the social network, stigmatisation and characteristics of the Dutch education system, we expect students in general education to develop higher levels of civic and political attitudes than do students in vocational education or people who do not follow education. Because the sample is representative of Dutch society overall, and because the data do not measure a particular phase in education, clean before-and-after measurements of enrolment in a type of education are not available. Therefore, we investigate *transitions* in types of education to observe the effect of type of education on civic and political attitudes. Following the multiple-destination educational transitions literature (Breen & Jonsson, 2000), we define transitions as the steps students take in terms of type of education between two waves in the longitudinal data. These transitions can entail moving from vocational to general education, vice versa, or staying in general or vocational education. Using a panel fixed effects model, we observe the effect of transition in type of education on the within-person change in civic and political attitudes. The findings demonstrate that students making educational transitions in general education (i.e. staying in or moving to general education) develop higher levels of interest in politics and generalised trust than do students remaining in the vocational educational trajectory or people remaining outside the education system.

Theoretical framework

Civic and political attitudes

Considering the lack of consensus on what constitutes civic and political engagement, it is important to initially explain our conceptualisation of civic and political attitudes. Civic and political engagement can be distinguished into knowledge, skills, behaviour or participation, and attitudes (Brady *et al.*, 1995; ten Dam *et al.*,

2011). In this article, we focus on the attitudinal dimension of civic and political engagement, partly in the form of intended behaviour. The five attitudes that we examine are selected based on their relevance to a well-functioning democracy and their resonance in the literature (Campbell, 2006). These attitudes are intention to vote, interest in politics, trust in institutions, generalised social trust and ethnic tolerance.

Voting is central to the legitimacy of a participatory democracy because it secures political equality and effective participation, which are two central criteria for democracy (Dahl, 1998). The measure of voting that we use in this article is intention to vote. Although intention to vote has been found to be an overestimation of the reported vote and the validated vote, it correlates strongly with actual voting (Achen & Blais, 2016).

High levels of political interest are also desirable within a democracy because they correspond to an engaged citizenry. Political interest is strongly correlated with political knowledge (Delli Carpini & Keeter, 1996; Dimitrova *et al.*, 2014), which contributes in turn to the ability of citizens to participate effectively in a democracy (Dahl, 1998; Galston, 2001; Levine, 2011).

A healthy, stable democracy also requires institutional and generalised social trust to some degree (Inglehart, 1997). Trust in institutions captures the belief concerning whether political and legislative authorities and institutions are performing their duties in a satisfactory manner and are not causing harm (Levi & Stoker, 2000). Trust in institutions is found to positively relate to formal and informal political participation (Torney-Purta *et al.*, 2004; Hyun-soo Kim, 2014).

Generalised social trust is widely considered an essential 'lubricant' in social systems that enable reciprocity (Almond & Verba, 1963; Putnam, 2000; Nannestad, 2008). As opposed to *personalised* social trust, generalised social trust captures the belief that one can trust strangers (Seligman, 1997; Putnam, 2000; Uslaner, 2002). It is associated with support for democracy and civic and political participation (Inglehart, 1990; Muller & Seligson, 1994; Uslaner & Brown, 2005).

The positive relationship between institutionalised and generalised trust, support for democracy and civic and political engagement only applies when there is a threshold of trust in institutions and the level of democracy (Torney-Purta *et al.*, 2004; Jamal & Nooruddin, 2010). Moreover, the democratic context also affects the relationship between educational level and trust. Hakhverdian and Mayne (2012) found that in corrupt societies, educational level and institutional trust are negatively related, whereas they are positively related in 'clean' societies.

Finally, we examine ethnic tolerance. Tolerance is a key value of liberal citizenship, and scholars often emphasise that contemporary multicultural democracies require tolerance of diverse groups (Putnam, 1993; Knight Abowitz & Harnish, 2006; Eidhof *et al.*, 2016). A prerequisite for democracy is that 'the rules of the game' are acknowledged and applied equally (Sullivan *et al.*, 1982). Therefore, an attitude of tolerance towards other ethnicities is often included in conceptions of civic engagement, although we acknowledge that this measure is a more politically contested measure of engagement than are the other measures that we use.

From the political socialisation studies concerning the acquisition and development of civic and political attitudes, we know that attitudes are acquired during the ‘impressionable years’ of late adolescence and early adulthood and remain highly stable after this period (Alwin *et al.*, 1991; Hooghe & Wilkenfeld, 2008). However, there are also indications that the crystallisation of civic and political attitudes continues for the rest of the lifespan (Sears & Funk, 1999). Studies thus suggest that when studying the development of attitudes, it is particularly important to investigate adolescents and young adults, but it is also informative to consider older adults.

Literature review

Longitudinal studies on the relationship between type of education and civic and political engagement have led to mixed findings. Some studies find evidence for a relationship between type of education and civic and political engagement. Eckstein *et al.* (2012) find that for German students between 12 and 16 years of age, being in the college-bound track has a positive effect on willingness to participate in politics and on positive attitudes towards politics. Janmaat *et al.* (2014) demonstrate that in England, people who have pursued an academic qualification (A Levels) from the age of 16 years have higher reported voting levels at ages 19–20 than do students who took vocational courses in less prestigious schools. Hoskins and Janmaat (2016) found that in England, both the level and type of educational pathways pursued from the age of 14 have an independent correlation with reported voting and protesting at age 19–20. Janmaat (2018) in fact finds that type of education matters more than level of education for several democratic and civic values for 23-year-olds in England. Finally, Geboers *et al.* (2015) demonstrate that for students aged 12–16 years in the Netherlands, the levels of some dimensions of civic skills and civic knowledge decrease after being in the vocational track longer.

Other studies find no effect of type of education on civic and political engagement. Persson (2012) shows that in Sweden, differences in various dimensions of political participation, including voting, are not affected after 1 year of being enrolled in the academic track at age 16 years. In contrast, characteristics of the early socialisation process—such as socioeconomic status (SES) and political discussion in the family—explained differences in political participation. Similarly, Witschge *et al.* (2014) find that in the Netherlands, enrolment in a particular type of education does not affect the civic knowledge and democratic attitudes of lower secondary education students. Both studies suggest that the differences in levels of civic and political engagement amongst students in different types of education are the result of student selection.

The mixed findings could be the result of many factors, such as differences amongst the dependent variables of the studies, the ages of the respondents and the time interval between the waves. However, they could also be explained by differences in the characteristics of education systems. Although we do not compare countries in this article, it is important to briefly reflect on the role that features of the Dutch education system could play in the relationship between type of education and civic and political engagement. There are two features that contribute to the likelihood of a relationship between type of education and civic and political engagement

in the Dutch education system, namely: (1) the relatively high degree of tracking and (2) the low status of vocational education compared with general education.

Across countries, the degree of tracking differs in terms of the age of first selection, the number of school types available and the duration of the tracked curriculum. Using an index that measures these three characteristics, van de Werfhorst (2017) shows that the differences in political engagement between people who took a vocational and general education are more pronounced in countries with a strongly tracked education system. Similarly, Janmaat and Mons (2011) find that the differences in the civic values of ethnic tolerance and patriotism between ethnic and socio-economic groups are smaller amongst 14-year-olds in countries with comprehensive schooling compared with early tracking education systems (see also Kavadias *et al.*, 2017). The Netherlands scores relatively high on van de Werfhorst's tracking index and can be characterised as an early tracking education system.

In addition to the degree of tracking, there are also considerable differences in vocational education across countries. Vocational education in the Netherlands is characterised by more school-based learning than workplace-based learning, and a clear hierarchy between types of education that leads to a low status for vocational education compared with general education (Cedefop, 2011). Several studies indicate that a low status for vocational education impedes students' civic and political participation as measured by club membership and future voting (Cedefop, 2011; Hoskins *et al.*, 2016).

Mechanisms

At least three underlying mechanisms exist through which vocational and general education programmes can result in different levels of civic and political attitudes. Below, we discuss these mechanisms, which lead us to derive our hypothesis, although the data we use do not allow for studying these mechanisms in detail.

First, differences in the curricula of vocational and general educational programmes can relate to differential civic outcomes of education. In terms of cognitive skills, general education has a more demanding curriculum than does vocational education. These cognitive skills, notably literacy, are positively related to citizenship competences (Verba *et al.*, 1995; Eidhof *et al.*, 2016). Moreover, several studies indicate that students in college-bound general secondary education receive more civic learning opportunities, such as access to government and civics classes, frequency of political discussion, service learning and participation in school councils (Kahne & Middaugh, 2009; Quintelier, 2010). Studies also indicate qualitative differences between the curricula of general and vocational education that lead to the encouragement of differential attitudes across types of education. In general education, a critical and active stance is often encouraged, whereas in vocational education, a passive and duty-based stance is more often stimulated (ten Dam & Volman, 2003; Ho, 2014). Building on these curricular differences, it is to be expected that students in general education develop more civic and political engagement than do students in vocational education.

Second, the social network of students in vocational and general education can influence civic and political attitudes. The SES of students is overall higher in

general tracks and lower in vocational tracks (Hallinan, 1994; Hanushek & Wössmann, 2006). Simultaneously, SES positively relates to civic and political engagement (Dalton, 2007; Levinson, 2012). Consequently, it can be expected that civic and political engagement will be higher amongst general education students. The findings concerning a social network effect on civic and political engagement vary for different outcomes. McClurg (2006) found that being exposed to more political sophistication from one's social network increases political participation. Nickerson (2009) found that exposure to political discussion indeed increases engagement in political talk but not in interest in politics. Attending general or vocational education can thus affect some dimensions of civic and political attitudes through the students' network.

Finally, the relatively high status of general education and, contrarily, the stigmatisation of vocational education can affect civic and political attitudes (Van Houtte & Stevens, 2008). As discussed above, vocational education in the Netherlands has a relatively low status compared with general education, and the low status of vocational education is associated with less civic participation or future voting (Cedefop, 2011; Hoskins *et al.*, 2016). It can be expected that the stigmatisation of vocational education could also lead to less development of other dimensions of civic and political engagement.

Based on this theoretical background, we formulate our central hypothesis: *Students who make transitions in general forms of education have a faster growth in civic and political attitudes than do students who make transitions in vocational forms of education or people who are not following education.*

Types of education in the education system of the Netherlands

In the Netherlands, the division between types of education starts at the beginning of secondary education at age 12, when students enrol in a pre-vocational [VMBO, European Qualifications Framework (EQF) level 1–2] or a general or pre-academic track (HAVO and VWO, respectively, which are both EQF 4) (Cedefop, 2015). This allocation is based on a test score and official advice from the elementary school teacher. Students who graduate from pre-vocational education can continue in upper secondary or post-secondary vocational education (MBO, EQF 1–4). Students who graduate from general secondary education can continue in higher education at a tertiary vocational college (HBO, EQF 5–6). Even when these institutions offer Bachelor's degrees, we follow the comparative literature in defining a tertiary vocational college as vocational education because it prepares students for a specific profession (e.g. Rijken *et al.*, 2007). Finally, students who graduate from pre-academic secondary education can enrol in academic higher education (university, EQF 6–7).

Within pre-vocational and vocational education, there are multiple study programmes that vary in the degree to which the approach is theoretical or vocational and vary in the duration of the study programme. However, overall, these programmes can be considered vocational. To define transitions in the educational career, we combine all vocational study programmes into one group and all general and academic types of education into another group.

Data and methods

Netherlands Longitudinal Lifecourse Study

The Netherlands Longitudinal Lifecourse Study (NELLS) dataset was collected in two waves (Tolsma *et al.*, 2014). The first wave was conducted between December 2008 and May 2010 and consists of a sample of 5,312 respondents. Respondents were between 14 and 49 years of age, and the response rate was 52%. The first wave provides a largely representative picture of Dutch society; however, two of the largest immigrant groups in the Netherlands, which originate from Morocco and Turkey, are oversampled (mostly of the second generation). Apart from this designed oversampling, the sample was reasonably well representative of the Dutch population.¹ The second wave was conducted between February 2013 and December 2013. From the first wave, 2,829 (53.3%) respondents were re-interviewed. This attrition rate is relatively large and mostly accounted for by the immigrant sample. The attrition rate for natives was only 33%, whereas it was 63% for Moroccans, 60% for Turks and 50% for other non-natives.

Operationalisation

We used five measures of civic and political attitudes, namely intention to vote, political interest, institutional trust, generalised social trust and ethnic tolerance. *Intention to vote* is measured with the question: 'If there were elections for the Second Chamber (House of Representatives) coming up, would you vote? Please assume you can vote.' The answer categories are: 0, 'most likely not'; 1, 'probably not'; 2, 'probably yes'; and 3, 'most likely yes'. *Political interest* is measured with the question: 'How much are you interested in political subjects?' The answer categories were recoded as: 0, 'not interested'; 1, 'fairly interested'; 2, 'very interested'. *Institutional trust* is measured with the question: 'Do you want to indicate for the following institutions how much trust you put in them?' The institutions that were listed are (i) politics, (ii) government, (iii) companies, (iv) the European Union and (v) police and justice. The answer categories were rescaled as follows: 0, 'little'; 1, 'relatively little'; 2, 'quite a lot'; 3, 'a lot'. The average of the four answers is used to create the final scale (alpha = 0.83 in wave 1; alpha = 0.84 in wave 2). *Generalised social trust* is measured with six items. The corresponding question reads: 'Do you want to give your opinion about the following statements? (i) these days you truly do not know who to trust anymore; (ii) most people disappoint me when I get to know them better; (iii) most people can be trusted; (iv) one cannot be too careful when meeting others; (v) when you easily trust people, people will take advantage of you; (vi) you will often be disappointed when you help others'. The answer categories are: 'strongly disagree', 'not agree', 'neutral', 'agree' and 'strongly agree'. They were recoded such that 0 stands for 'little trust' and 4 stands for 'a lot of trust'. The average of the items is used to construct the final scale (alpha = 0.81 in wave 1; alpha = 0.84 in wave 2). Finally, *ethnic tolerance* was measured by the following question about tolerance towards intermarriage: 'Would it be a problem for you if someone of "x" origin married your son or daughter?' We recoded the answer so that 0 stands for 'yes' and 1 stands for 'no'. The

ethnic backgrounds that are represented in the sample are Dutch, Turkish, Moroccan, Surinam or Antillean, and other (first or second generation). The score on this variable is the mean answer to this question about the three ethnicities that are not the respondents' own ethnicity. Table 1 presents the descriptive statistics of our dependent variables and our other variables.

Our main independent variable is *transition in type of education*. To measure *type of education*, we made a distinction between the respondents who were enrolled in general education, enrolled in vocational education or not enrolled in any education. The educational attainments that were viewed as being in the general category are general and pre-academic general secondary education (HAVO and VWO, EQF 4), higher education first phase high level (University Bachelor, EQF 6), higher education second phase (University Master, EQF 7) and higher education third phase (PhD, EQF 8). The category of respondents enrolled in vocational education comprised people enrolled in lower secondary vocational education (VMBO/MAVO, EQF 1–2), upper secondary vocational education (MBO, EQF 1–4) and tertiary vocational education first phase low and intermediate level (HBO, EQF 5–6). The group of people not enrolled in any education is a heterogeneous group that includes graduates,

Table 1. Descriptive statistics (before multiple imputation)

	Min	Max	$r(W1, W2)$	Wave 1			Wave 2		
				n	Mean	SD	n	Mean	SD
Time-variant									
<i>Civic involvement</i>									
Intention to vote	0	3	0.389	5311	2.139	1.137	2.829	2.474	0.925
Political interest	0	2	0.549	4856	0.675	0.636	2.801	0.734	0.630
Institutional trust	0	3	0.511	4863	1.331	0.558	2797	1.270	0.547
Generalised social trust	0	4	0.653	4878	2.002	0.673	2.801	2.106	0.700
Ethnic tolerance	0	1	0.544	4857	0.623	0.426	2.797	0.641	0.425
<i>Type of education</i>									
Following general education	0	1	0.426	371	0.070	0.255	104	0.020	0.014
Following vocational education	0	1	0.312	996	0.188	0.391	259	0.049	0.215
Not following education	0	1	0.426	3925	0.742	0.438	4947	0.932	0.252
Education level	0	11	0.907	5227	5.488	2.689	2729	6.362	2.439
Time-invariant									
Age (at wave 1)	14	49	1	5312	31.298	9.017	Id.	Id.	Id.
Gender (1 = female)	0	1	1	5312	0.528	0.499	Id.	Id.	Id.
SES	0	7	1	4937	2.961	2.264	Id.	Id.	Id.
Ethnicity: Dutch	0	1	1	5312	0.481	0.500	Id.	Id.	Id.
Ethnicity: Moroccan	0	1	1	5312	0.219	0.414	Id.	Id.	Id.
Ethnicity: Turkish	0	1	1	5312	0.214	0.410	Id.	Id.	Id.
Ethnicity: other	0	1	1	5312	0.086	0.280	Id.	Id.	Id.

dropouts, employed and unemployed people. In our analytic strategy below, we describe how we operationalise transitions in type of education based on type of education.

Table 2 presents the differences in the civic and political attitudes of the respondents in general and vocational education and the respondents who are not enrolled in education in waves 1 and 2. In both waves, people in general education score higher on all measures of civic and political attitudes than do people in vocational education or people out of education. Within all three education type categories, the outcome variables of intention to vote, interest in politics and generalised trust increase between the two waves, whereas institutional trust decreases. Ethnic tolerance decreases for people in general education and increases for people in vocational education and people who are not enrolled in education.

We control for *age*, *gender* (female = 1), *SES* (measured as parents' highest education), *ethnicity* and *highest attended level of education*. Level of education was measured on a 12-point scale, including: 0, 'no education'; 1, 'primary education'; 2, 'practical vocational secondary education' (LBO, VMBO-kb/VMBO-bbl, EQF 1); 3, 'theoretical vocational secondary education' (VMBO-tl/MAVO, EQF 2); 4, 'upper secondary vocational education' (MBO 2 years, EQF 2–4); 5, 'post-secondary vocational education' (MBO 4 years, EQF 4); 6, 'general secondary education' (HAVO, EQF 4); 7, 'pre-academic secondary education' (VWO, EQF 4); 8, 'tertiary vocational education' (HBO, EQF 5–6); 9, 'university bachelor' (EQF 6); 10, 'university master' (EQF 7); 11, 'PhD' (EQF 8). For *SES*, a similar scale is used for parents' highest completed educational level, only with fewer categories: 0, 'did not finish primary education'; 1, 'primary education'; 2, 'practical vocational secondary education' (LBO/VMBO); 3, 'theoretical vocational secondary education' (VMBO-tl/MAVO); 4, 'upper secondary and post-secondary vocational education' (MBO); 5, 'general secondary education' (HAVO); 6, 'tertiary vocational education' (HBO); 7, 'university'. We included dummies for ethnicity (first- or second-generation Dutch, Turkish, Moroccan, Surinam or Antillean, and other).

For approximately 600 respondents, the highest attended level of education in wave 1 was higher than in wave 2. In these cases, we replaced the value for the highest attended educational level in wave 2 with the value in wave 1. When this problem

Table 2. Average level of civic and political attitudes for respondents who followed general and vocational education and who did not follow education

	Wave 1			Wave 2		
	General	Vocational	Not following education	General	Vocational	Not following education
Intention to vote	2.305	1.932	2.180	2.760	2.448	2.465
Interest in politics	0.916	0.602	0.671	1.225	0.667	0.727
Institutional trust	1.597	1.402	1.287	1.471	1.260	1.263
Generalised social trust	2.260	1.921	1.998	2.440	1.994	2.104
Ethnic tolerance	0.743	0.621	0.612	0.712	0.707	0.631

occurred with the imputed data (see below), we did the same. This choice led to an increased correlation of educational level between the two waves of 0.91 instead of 0.79. As a robustness check, we re-ran the models without the respondents who indicated a higher level of attended education in wave 1 than in wave 2. This variation did not change the findings substantially.

Analytic strategy

Linear fixed effects models are used to analyse the data. Fixed effects models introduce a separate parameter for a chosen level of interest. Consequently, their benefit is that they control for all time-invariant covariates at this level, measured or not measured, which eliminates the risk of bias due to confounding time-invariant variables (Allison, 2009). We apply fixed effects at the level of the individual, and we therefore only examine the within-person variation between waves 1 and 2. The fixed effects estimator does not account for the time-variant variables or the unmeasured time-invariant characteristics of which the effects on the dependent variable change over time. We include the time-variant variables *transition in type of education* and *highest achieved educational level* in our models. Age, gender, SES and ethnicity are treated as time-invariant variables. Therefore, we use the score on wave 1 for these variables. Time-invariant variables cannot be directly included in a fixed effects model but enter the model in interaction with our wave variable, indicating the average change between the waves. Age could be included as a time-varying variable, but because each respondent on average becomes 4 years older between the waves, a change in this variable does not correspond to an ‘age effect’ but to the average change between the waves. We control for the average change between the waves by including wave dummies. The constants represent the average value of the fixed effects. Robust standard errors are reported.

We test our hypothesis by investigating the effects of transitions in type of education on civic and political attitudes. In addition to transitioning in type of education within the education system, people move in and out of the overall education system. Therefore, we incorporate ‘not following education’ as a third possible transition input or output, which leads to nine possible transitions between waves 1 and 2, as presented in Table 3. In particular, the transition from not following education to a general education is rare ($n = 3$). Because of this small n , we do not present the results of this group. To measure the transitions, nine variables are created on which every respondent scored a 0 in wave 1 and, when the transition applies to the respondent, a 1 in wave 2. One variable is excluded from the analyses and forms the reference category. We chose the category in which the respondents are following general education in both waves as the reference category, because we expect that general education enhances civic engagement compared with vocational education and staying in or moving out of the education system.

Table 4 presents the sample size for the nine transitions ordered by age category. It shows that after age 28, only transitions out of education are made. Considering that we are interested in people making transitions in vocational and general education, it makes sense to focus only on the age group in which these transitions are made. We also performed our analyses with a sample of respondents aged 14–28 years.²

Table 3. Transitions in type of education

Wave 1		Wave 2	<i>n</i>
Following general education	→	Following general education	87
Following general education	→	Following vocational education	54
Following general education	→	Not following education	229
Following vocational education	→	Following general education	14
Following vocational education	→	Following vocational education	188
Following vocational education	→	Not following education	794
Not following education	→	Following general education	3
Not following education	→	Following vocational education	17
Not following education	→	Not following education	3,904
Total			5,290

Table 4. Transitions in type of education by age category

Age	G–G	G–V	G–N	V–G	V–V	V–N	N–G	N–V	N–N	Missing	Sum
14–18	40	48	62	5	129	282	1	6	34	2	609
19–23	42	6	72	9	57	266	1	8	258	1	720
24–28	5	0	56	0	2	88	1	3	548	5	708
29–33	0	0	16	0	0	48	0	0	799	2	865
34–38	0	0	8	0	0	53	0	0	844	6	911
39–43	0	0	14	0	0	44	0	0	1,048	4	1,110
44–49	0	0	1	0	0	13	0	0	373	2	389
Sum	87	54	229	14	188	794	3	17	3,904	22	5,312

G, general; V, vocational; N, not following education.

Considering our hypothesis, this sample largely led to the same findings, but the findings were less robust than were our findings from the analysis of the entire sample, most likely due to less statistical power. Therefore, we present the results from the overall sample. In our results section we mention the results that differ from the results that we found when studying the younger sample (concerning intention to vote).

Selection bias and attrition

As is common when working with panel data, we must account for missing values, selection bias in wave 1 and attrition in wave 2. The oversampling of Turkish and Moroccan respondents in wave 1 is accounted for by including weights. To address the missing values and relatively large attrition (47%), we applied multiple imputation. Although this method does not guarantee unbiased results, when attrition is high, it is a better way to ensure internal validity than alternative methods to address attrition—such as complete subject analysis or inverse weights (Kristman *et al.*, 2005; Young & Johnson, 2015). We used truncated regressions to obtain the imputed values for trust in institutions, generalised trust and ethnic tolerance. Ordered logistic regressions were used to obtain the imputed values for intention to vote, interest in

Table 5. Results of linear effects models

	Intention to vote		Interest in politics		Trust in institutions		Generalised trust		Ethnic tolerance	
	1	2	3	4	5	6	7	8	9	10
Transition in type of education										
G-G (ref.)										
G-V	-0.019 (0.250)	-0.002 (0.250)	-0.369** (0.127)	-0.403** (0.127)	0.025 (0.109)	0.034 (0.108)	-0.241* (0.104)	-0.229* (0.105)	-0.002 (0.087)	-0.035 (0.088)
G-N	-0.363† (0.190)	-0.324† (0.191)	-0.454*** (0.106)	-0.453*** (0.106)	0.083 (0.078)	0.075 (0.079)	0.097 (0.089)	-0.091 (0.090)	-0.120† (0.067)	-0.131† (0.068)
V-G	-0.348 (0.232)	-0.327 (0.233)	0.075 (0.182)	0.056 (0.180)	0.024 (0.142)	0.035 (0.142)	0.071 (0.192)	-0.064 (0.193)	0.094 (0.119)	0.070 (0.120)
V-V	-0.026 (0.200)	-0.027 (0.202)	-0.379*** (0.102)	-0.405*** (0.102)	0.013 (0.074)	0.023 (0.075)	-0.170* (0.087)	-0.158† (0.087)	0.075 (0.070)	0.043 (0.071)
V-N	-0.197 (0.180)	-0.193 (0.182)	-0.290*** (0.091)	-0.295*** (0.092)	0.024 (0.068)	0.021 (0.069)	-0.214** (0.075)	-0.200** (0.077)	-0.068 (0.056)	-0.092 (0.058)
N-V	-0.017 (0.392)	0.000 (0.376)	-0.436 (0.275)	-0.442 (0.274)	0.158 (0.169)	0.157 (0.165)	0.119 (0.137)	0.125 (0.138)	0.105 (0.106)	0.092 (0.107)
N-N	-0.439** (0.165)	-0.327† (0.175)	-0.371*** (0.083)	-0.345*** (0.089)	0.099† (0.059)	0.055 (0.066)	-0.202** (0.066)	-0.186* (0.074)	-0.042 (0.052)	-0.061 (0.057)
Control variables										
<i>Time-variant</i>										
Wave	0.543*** (0.163)	0.772*** (0.199)	0.417*** (0.082)	0.574*** (0.103)	-0.154** (0.059)	-0.225** (0.079)	0.225*** (0.065)	0.176* (0.087)	-0.042 (0.052)	0.065 (0.065)
Education level	0.053† (0.029)	0.043 (0.029)	-0.011 (0.015)	-0.011 (0.015)	-0.004 (0.013)	-0.003 (0.013)	-0.015 (0.015)	-0.014 (0.015)	0.018† (0.063)	0.018† (0.010)
<i>Time-invariant</i>										
Wave × age		-0.009* (0.004)		-0.004† (0.002)		0.004* (0.002)		0.000 (0.002)		-0.001 (0.001)
Wave × female		0.021 (0.047)		-0.023 (0.026)		-0.050* (0.022)		0.021 (0.024)		-0.018 (0.017)
Wave × SES		-0.019		-0.010		0.004		0.006		-0.010*

Table 5. (Continued)

	Intention to vote		Interest in politics		Trust in institutions		Generalised trust		Ethnic tolerance	
	1	2	3	4	5	6	7	8	9	10
Wave × Moroccan		(0.013)		(0.007)		(0.006)		(0.007)		(0.006)
(ref. Dutch)		-0.008		-0.154***		0.042†		-0.063†		0.011
Wave × Turkish		(0.073)		(0.037)		(0.006)		(0.038)		(0.023)
		0.085		-0.024		-0.016		0.001		0.073***
Wave × other		(0.071)		(0.038)		(0.030)		(0.038)		(0.022)
Ethnicity		0.185*		-0.041		-0.001		0.011		-0.052*
		(0.090)		(0.043)		(0.036)		(0.040)		(0.025)
Constant	1.958***	2.017***	0.772***	0.774***	1.412***	1.406***	2.253***	2.248***	0.534***	0.539***
	(0.181)	(0.179)	(0.092)	(0.092)	(0.081)	(0.081)	(0.090)	(0.090)	(0.063)	(0.063)
Observations	10,624	10,624	10,624	10,624	10,624	10,624	10,624	10,624	10,624	10,624
Number of ID	5,312	5,312	5,312	5,312	5,312	5,312	5,312	5,312	5,312	5,312

Standard error in brackets.

Results for the group not following education in wave 1 and attending general education in wave 2 are not presented because the size of this group ($n = 3$) is not sufficient to lead to reliable results.

*** $P < 0.001$; ** $P < 0.01$; * $P < 0.05$; † $P < 0.1$.

politics and SES. Finally, we used a multinomial logistic regression to obtain the imputed values for the transitions in education. In total, we created 50 imputed datasets. For the second wave, we used the weights of the first survey, which is allowed because we used the same respondents in the second wave and the missing values are imputed.

As a robustness check, we repeated our analyses with inverse weights (i.e. a higher weight for the respondents who did not participate in the second wave) rather than using multiple imputation. Using logistic regression including all of the independent and control variables of our models, we determined the probability to be observed twice and took the inverse of this probability. We multiplied this inverse by the weight variable for wave 1 to account for both sample selection and attrition, and used the outcome as our weight variable. Concerning our hypothesis, there was only one difference in the results (concerning ethnic tolerance), which is reported in the results section.²

Results

The results of the linear fixed effects models are presented in Table 5. For each outcome variable, the table includes two models. In the first model, we examine whether a change in the type of education is related to the outcome variable by controlling for changes in the educational level. In the second model, our time-invariant background variables of age, gender, SES and ethnicity are included in the model as an interaction with the wave.

Our hypothesis is confirmed when the transitions in general education are associated with a stronger increase in our outcome variables between waves 1 and 2 than are the other transitions in type of education. Two groups are making transitions in general education in our model, namely: (1) people who are following general education in both waves (the reference group) and (2) people who are moving from vocational education to general education. Our hypothesis implies that we expect the people who are moving from vocational to general education either to have a stronger increase in the outcome variables compared with the reference group (i.e. a positive effect) or to not differ significantly from the reference group. For all other transitions, we expect less growth in the outcome variables compared with the reference group (i.e. a negative effect). Overall, we find 25 significant effects that indicate that type of education affects civic and political attitudes. Of these 25 effects, 24 are consistent with our hypothesis. However, there are 45 non-significant effects, of which only 10 are consistent with our hypothesis. Below, we discuss the results in greater detail.

The effects of the waves indicate the change in the concerned outcome variable between waves 1 and 2 for the reference group, holding educational level and the other control variables constant. The findings demonstrate that intention to vote, interest in politics and generalised trust increased between waves 1 and 2 for the reference group, whereas trust in institutions decreased. We find no significant change in ethnic tolerance.

Most support for our hypothesis is found for the outcome variable *interest in politics*. Models 3 and 4 demonstrate that between waves 1 and 2, compared with the reference group, interest in politics increases less for all transitions in type of education

apart from the transition from vocational to general education and the transition from not following education to vocational education. These results mean that with respect to interest in politics, our hypothesis is confirmed for all transition variables that have a smaller increase than the reference group. Because we expected the civic and political attitudes of students making a transition from vocational to general education to either increase or to not differ significantly compared with the reference group, the non-significant effect of this transition also complies with our hypothesis. The only transition for which the hypothesis is rejected is the transition from not following education to vocational education, for which we do not find a significant effect.

For generalised trust, we also find substantial support for our hypothesis. Compared with the reference group, generalised trust in models 7 and 8 increases less between waves 1 and 2 for people making transitions from general to vocational education and from vocational education to not following education, and for people who are in vocational education or not following education in both waves. Moreover, in model 8, these negative effects, apart from the effect on the people who are in vocational education in both waves, are larger than the positive effect for the wave. This finding implies that between waves 1 and 2, generalised trust in fact decreases for the people making these transitions. These findings and the non-significant effect of people who move from vocational to general education are consistent with our hypothesis. However, our hypothesis is not confirmed for the transitions from general education to no education or from no education to vocational education.

For the other dependent variables, we find support for our hypothesis but not nearly as much as for interest in politics and generalised trust. In models 1 and 2, intention to vote increases significantly less than the reference group for people making a transition from general education to no education and for people who are not enrolled in education in both waves. Both findings support our hypothesis. However, in our robustness check, in which we only examine respondents who are 14–28 years of age, these findings are no longer significant in model 2. Considering this point, our hypothesis is only robustly confirmed for people who move from vocational to general education.

The change in ethnic tolerance (models 9 and 10) between waves 1 and 2 only differs significantly from the reference group for people making a transition from general education to no education. For this group, ethnic tolerance increases less than the reference group. However, in our robustness check, in which we use inverse weights to account for attrition rather than using multiple imputation, this effect is not significant. With this lack of robustness, with respect to ethnic tolerance, our hypothesis is only confirmed for the group that makes a transition from vocational to general education.

The results for trust in institutions (models 5 and 6) provide the least support for our hypothesis. In model 9, the only group that differs significantly from the reference group in terms of the change in trust in institutions between waves 1 and 2 is the group that was not following education in either wave. For this group, trust in institutions decreased less than it did in the reference group. This finding is not consistent with our hypothesis. However, when we control for our time-invariant control variables in model 10, this effect is no longer significant, which suggests that the significant effect in model 9 is in fact explained by the control variables that are included in

model 10. Once again, the only finding that supports our hypothesis is the non-significant effect of moving from vocational to general education.

Considering that we are interested in whether vocational and general education relate to differential civic and political attitudes, the most relevant results are the transitions in general or vocational education, not the transitions out of education. Our hypothesis concerning these transitions is only fully confirmed for interest in politics and generalised trust; students in general education have faster growth in their interest in politics and generalised trust than do students in vocational education.

A pattern that we observe throughout the results is that the people making transitions from vocational to general education, and the people making transitions from no education to vocational education, do not differ significantly from the reference group in the development of all of the outcome variables. In the case of people making transitions from no education to vocational education, this finding suggests that vocational education is more beneficial to the development of civic and political attitudes than is no education. Another finding that should be identified is that making a transition from general education to no education leads to a smaller increase in intention to vote, interest in politics and ethnic tolerance compared with the reference group. Although these results are consistent with our hypothesis, they suggest that perhaps the positive effect of general education (in the case of intention to vote and interest in politics) wears off after leaving general education.

Educational level is only marginally significantly related to the changes in two outcome variables between waves 1 and 2, intention to vote (in model 1) and ethnic tolerance (in models 9 and 10). Hence, there is little evidence of an additional effect of educational level on civic and political attitudes on top of the effect of the type of education on civic and political attitudes. This result suggests that type of education is a more important predictor of civic and political attitudes than is educational level. We should interpret this finding with caution, however, because the reliability of our educational level measure is somewhat compromised (see the methods section).

The wave by age interactions demonstrate that intention to vote and interest in politics *increase* less and that trust in institutions *decreases* less for every year a person is older. These neutralising effects are consistent with the idea that attitudes become more crystallised over the years, with the consequence that older people are less prone to changes in their attitudes (Alwin *et al.*, 1991; Hooghe & Wilkenfeld, 2008). However, the effect size of the interactions between the wave and age is relatively small and adds up to a maximum of approximately one-third of one standard deviation for intention to vote, a quarter of one standard deviation for ethnic tolerance and one-fifth of one standard deviation for interest in politics.³

Being a woman is negatively associated with the change in trust in institutions between waves 1 and 2. The findings for the wave by SES interactions indicate that ethnic tolerance increases less by -0.01 ($P < 0.05$) between the waves for every unit increase in SES. We also find indications that ethnicity relates to our outcome variables. For Moroccans, interest in politics and generalised trust *increase* less and trust in institutions *decreases* less between waves 1 and 2 compared with Dutch people. Being Turkish is negatively associated with the change in ethnic tolerance between wave 1 and 2 compared with being Dutch. Finally, for people of other ethnicities,

interest in politics increases more and ethnic tolerance increases less between the two waves compared with the reference group.

Conclusion

In this article, we examined the relationship between type of education—general or vocational—and five attitudinal dimensions of civic and political engagement between the ages of 14 and 49 years in the Netherlands. Based on the differences in the curricula, social networks, social status of general and vocational education, and characteristics of the Dutch education system, we hypothesised that pursuing general education is beneficial for civic and political attitudes compared with pursuing vocational education or being out of education. To observe the effect of type of education, we examined transitions in types of education. By using panel data from the Netherlands Longitudinal Lifecourse Study and applying linear fixed effects, we were able to observe the effect of a transition in type of education on the within-person change in civic and political attitudes.

The five attitudes that we studied are intention to vote, interest in politics, trust in institutions, generalised trust and ethnic tolerance. Consistent with our hypothesis, we found substantial evidence that people in general education have faster growth in interest in politics and generalised trust than do people in vocational education or outside the education system. This finding implies that the allocation of students into different types of education increases the pre-existing differences in these attitudes amongst social groups. A similar conclusion was drawn in several European country-case studies that examined the relationship between type of education and various dimensions of civic and political engagement (Eckstein *et al.*, 2012; Janmaat *et al.*, 2014; Geboers *et al.*, 2015; Hoskins & Janmaat, 2016).

However, for intention to vote, trust in institutions and ethnic tolerance, we did not find significant support for a relationship with type of education. This result suggests that the higher average levels of these attitudes for people in general education are a consequence of selection into general education of people with characteristics that are favourable to these attitudes. These findings are consistent with the findings of Persson (2012) and Witschge *et al.* (2014). Persson (2012) identifies parents' level of political participation and the discussion climate at home as two possible pre-adult factors that might influence both civic engagement and the (choice of) type of education.

Although the lack of a relationship between making a transition in general or vocational education and intention to vote is consistent with the findings by Persson (2012) for Sweden, the finding is somewhat surprising. Sweden is known for its egalitarian education system with a low degree of tracking. Multiple studies of countries with a relatively *high* degree of tracking (Germany) or a relatively low status for vocational education (England) have reported an effect of type of education on voting (Cedefop, 2011; Eckstein *et al.*, 2012; Janmaat *et al.*, 2014; Hoskins & Janmaat, 2016). Perhaps the features of the Dutch education system or the wider country context in the Netherlands are not as harmful to electoral participation for the people from vocational education as we theorised. Alternatively, there might be other Dutch education system or country-context features that are ameliorating the negative

consequences of early tracking and a low status of vocational education. Another possible explanation for not finding a relationship between type of education and intention to vote is that in the studies in which a relation was found, the respondents were followed for a longer period. Moreover, the other studies used reported voting (Janmaat *et al.*, 2014; Hoskins & Janmaat, 2016) or a broader index of participation including intention to vote as a measure of voting, whereas we used intention to vote.

The fact that we did not find a relationship between type of education and ethnic tolerance does not match the findings of Janmaat and Mons (2011), who demonstrate that differences in ethnic tolerance amongst socioeconomic groups are larger in early tracking education systems. However, because of the cross-sectional nature of this study, a comparison with our findings is ambiguous. Another reason for their different findings could be that they only focused on students aged 13–14 years. There are no existing studies on the relationship between type of education and the other three civic and political attitudes that are central in our study.

Our results raise the question of why some civic and political attitudes are affected by type of education but others are not. We can only speculate about the reasons for this finding. Perhaps the development of some civic and political attitudes is more dependent upon education experiences, whereas the development of other attitudes is more dependent upon SES and the civic engagement of one's parents. Alternatively, some attitudes might be established during the years of secondary and tertiary education, whereas others are not. Focusing on the underlying mechanisms of the relationship between type of education and civic and political engagement in future studies could perhaps increase our understanding of why type of education is related to some attitudes but not to others. In any case, our results emphasise that when studying the relationship between education and attitudes, different attitudes should not be painted with the same brush.

The findings provide some support that intention to vote, interest in politics and trust in institutions become more crystallised over the years, which suggests that type of education would have a smaller effect on these attitudes when enrolment in general or vocational education occurs at a greater age. Because interest in politics is the only attitude for which we find an interaction between the wave and age and a relationship with type of education, this effect only applies to this outcome variable. However, based on this study, we cannot say with certainty that type of education would have a smaller effect on interest in politics when enrolment in general or vocational education occurred at a higher age.

Our results provide little evidence for an independent effect of the *level* of education on civic and political attitudes. We only found such an effect for ethnic tolerance. This result suggests that type of education is a more important predictor of civic and political attitudes than is educational level. We should interpret this finding with caution, however, because the reliability of our educational level measure is somewhat compromised (see the methods section). Unfortunately, the data do not allow for a good solution to this problem. Because this reliability problem does not apply to a majority of the data on educational level, we believe that it does not compromise our findings.

Another limitation of the data is the relatively small share of the respondents who are enrolled in education. A vast majority of the respondents are not enrolled in

education in both waves. Considering that this group is very heterogeneous, the results for the transitions into and out of 'not following education' are not straightforward. Some transitions in type of education in particular have a small *n*. The smallest group, the transition from not following education to general education, has been omitted from the results for this reason. Moreover, all transitions in vocational and general education occur before the age of 28, which impedes an analysis of the relationship between type of education and attitudes for different age groups.

We also cannot rule out the possibility that time-variant factors that are related to the transitions in type of education are in fact driving our results. Other factors that could possibly affect our findings are changes in the curricula, the learning environment and teaching methods, or changes outside education, such as social relationships outside the school environment. Furthermore, the nine transitions that we examine are a simplification. We do not distinguish amongst different forms of general or vocational education. One form of general or vocational education might be driving the results, or two forms might be cancelling each other out.

Finally, as with most panel data, there is substantial attrition in the data that are used for this study. Despite our efforts to address the attrition in the best way possible, attrition remains a threat to the validity of our results.

Despite these limitations, the study contributes to the literature in two ways. First, we apply panel fixed effects models, which have the advantage of accounting for unmeasured time-invariant covariates such as intelligence, personality and family background. Accordingly, this method significantly decreases the risk of confounding variables. Second, by adopting a wide scope on civic and political attitudes, we increase our knowledge concerning nuances amongst different types of civic and political attitudes when studying the effect of type of education. This study advances a clear picture that type of education in the Netherlands relates to the development of some civic and political attitudes and not other attitudes. This outcome suggests that general education fosters some civic and political attitudes, at least in the Netherlands, and that educational differentiation might be harmful to promoting democratic equality.

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NOTES

¹ There was a slight overrepresentation of women, older respondents and respondents living in moderately urbanised municipalities.

² Results available upon request.

³ Based on the maximum age difference of 35 years (49–14) and data of the outcome variables from wave 2 (Table 1).

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