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*The role of language ability*

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## Youth citizenship at the end of primary school: the role of language ability

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### ABSTRACT

Schools are expected to fulfil different types of goals, including citizenship development. An important question is to what extent schools can simultaneously promote different learning outcomes. In this paper, we investigate the relationship between language ability and youth citizenship. Using a representative sample of 2429 grade 6 pupils (age 11–13) in 138 primary schools in the Netherlands, our findings confirm that language ability is strongly associated with pupils' youth citizenship outcomes, in particular with citizenship attitudes and knowledge. Contrary to popular belief, we conclude that stimulating pupils' language development need not compete with investing in pupils' citizenship development. Rather than a trade-off, our findings suggest a positive relationship between language ability and citizenship development.

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## Introduction

Cognitive ability has been reported to be an important predictor of citizenship outcomes. Higher achieving adolescents know more about citizenship than lower achieving adolescents (Geijsel et al. 2012; Schulz et al. 2010). Higher cognitive ability is also positively related to democratic participation indicated by, for example, voter participation and support for free speech (Dee 2004; Hauser 2000). In citizenship studies, cognitive ability is typically measured by a general measure of intelligence, a measure that combines verbal and mathematics abilities, or using (expected) educational level as a proxy (Geijsel et al. 2012; Hoskins, Janmaat, and Villalba 2012; Isac et al. 2011; Lopez et al. 2009; Quintelier 2010; Schulz et al. 2010). However, educational level has been shown to have an effect on civic engagement independent of cognitive ability (Hauser 2000), while general measures of cognitive ability or measures that combine different types of cognitive ability may veil which component of cognition positively relates to citizenship development. To tackle these methodological challenges, our study includes various, more specific measures of cognitive ability.

In this paper, we specifically investigate the role of language ability in youth citizenship. In general, language is the most important tool for social interaction and serves as a vehicle by which people make sense of the outside world and their own position therein (Lee and Smagorinsky 2000). We therefore hypothesise that the development of language ability strengthens youth citizenship development, and is more important than other facets of cognitive ability or school achievement.

Gaining further insight into the relationship between language ability and citizenship outcomes is important for educational practice. Schools are expected to fulfil a myriad of goals. As a consequence, the schools' curricula may put teachers and principals under pressure, given time constraints and the risk of curriculum overload. In addition to the development of academic learning outcomes such as language and mathematics ability and school subjects like history or biology, schools are asked to promote healthy behaviour, prepare pupils for the twenty-first century labour market, stimulate creativity and promote road traffic security awareness, among others. As all of these goals compete for scarce educational resources, and in particular for time, curriculum overload is being reported in many countries (NCCA 2010).

Of these educational goals, particular emphasis has been put on improving results of the so-called cognitive core curriculum in the last decade, spurred by international comparisons provided by the PISA, TIMSS and PIRLS studies. Language, mathematics and science tend to be in the centre of attention of schools. At the same time, a renewed focus on citizenship education can be observed; in almost all Western countries, schools are obliged to develop pupils' citizenship (Eurydice 2012; The National Task Force on Civic Learning and Democratic Engagement 2012; Osler and Starkey 2006). Which of these various goals should receive priority is debated both within and outside of academia (Biesta 2009; Hanushek 2013; Nussbaum 2012; OECD 2010). Yet, advancing language ability and citizenship competences of pupils might not exclude one another. Rather, development of one might stimulate development of the other. By scrutinising this relationship, this paper aims to provide additional insight into prerequisites for effective citizenship interventions in schools as well.

## Theoretical background

In order to clarify the relation between language ability and citizenship competence, it is important to first specify what kind of citizenship we are studying. This is an important matter in its own right, as the conceptualisation of what good citizenship entails for school-going youth not only differs, but has been changing in recent years as well (Knight Abowitz and Harnish 2006; Oser and Veugelers 2008). Given the important differences in the exposure to citizenship situations between adults and youth, authors are increasingly starting to recognise that notions of citizenship for school-going youth should not only reflect prerequisites for citizenship in adult life, but also be specific to the situation young people find themselves in (Biesta, Lawy, and Kelly 2009; ten Dam et al. 2011; Lawy and Biesta 2006). For example, the right to participate in decision-making on political issues is typically withheld from children and adolescents. On the interpersonal level, relationships and roles are of a different nature for youth than for adults as well. As a result, the development of citizenship for people of different ages is dependent on different contexts and experiences. Hence, when attempting to gain insight into the development of citizenship of youth, it is important to focus on the actual citizenship practices of pupils themselves, rather than to just concentrate on their distant citizenship-to-be.

For these reasons, we use a conceptualisation of citizenship that embeds citizenship into the daily lives of young people and at the same time recognises challenges posed by the plurality present in modern society. Our notion of youth citizenship includes the interpersonal and societal dimensions of future citizenship competences in situations that have relevance for pupils in their current life, encompassing knowledge and skills centred around four key tasks that can be considered as exemplary for citizenship: being able to act democratically, being able to act in a socially responsible manner, being able to deal with conflicts and being able to deal with differences (for more information, see ten Dam et al. 2011).

So far, studies investigating citizenship education have identified a number of factors that influence citizenship competence (Dijkstra, de la Motte, and Eilard 2014; Geboers et al. 2013). At the level of the individual, factors such as household socio-economic status, political engagement of parents and gender have been shown to influence citizenship competence and civic engagement (Geijsel et al. 2012; Schulz et al. 2010; Smets and Neundorf 2014). These are all factors that fall outside the sphere of influence of schools. With regard to the impact schools can have on citizenship, having an open

classroom climate, in which controversial issues are discussed and multiple perspectives are shared, is among the most consistently mentioned effective factors (Finkel and Ernst 2005; Flanagan et al. 1998; Geboers et al. 2013; Gniewosz and Noack 2008; Isac et al. 2013; Schuitema et al. 2009; Torney-Purta 2004). Moreover, specific school subjects (e.g. social studies and/or history) and/or citizenship programmes and well-defined goals in citizenship education can positively influence pupils' citizenship (Dijkstra et al. 2014; Geboers et al. 2013). Unfortunately, existing research has examined citizenship and civic outcomes in isolation, ignoring the multiple tasks that schools have to foster 'standard' academic achievement outcomes and civic outcomes at the same time. A closer inspection of the relationship between different forms of academic achievement and citizenship outcomes helps us understand whether there would indeed be a trade-off between two of the central tasks of schooling. Gaining further insight into the relationship between development of language ability and citizenship development would provide important information to teachers and school leaders about the possibilities for pursuing different types of learning goals simultaneously and purposefully. In the next section, we provide theoretical arguments for the importance of language ability in particular for the development of citizenship competence.

### *The role of language ability in citizenship competence*

Why might language be so important for citizenship competences? Various disciplines underline the role language plays in fostering the development of meaning. Social cognition scholars ascribe a central role to language in processes of meaning-making and exchange of meaning (Holtgraves and Kashima 2008). Through language, young people attach meaning to the world around them, so they can develop a picture of society and themselves as citizens. In language philosophy, two dominant perspectives relate language to meaning (Lepore and Smith 2008; Taylor 1985; Wertsch 2000).

Taylor (1985) defines the designative approach as based on the assumption that language provides meaning to individuals by representing an independent or objective reality. In this perspective, words have meaning as they refer to what they designate. This approach implies that language allows for abstraction and discussion of the social and physical environments, using the lexicon to draw attention to external phenomena, describe observations and explore relations. The latter also resonates with an aspect of language described by social cognition scholars, who view language as 'a semiotic tool for converting a speaker's inchoate experience into an explicit and communicable form' (Holtgraves and Kashima 2008).

The expressivist approach, on the other hand, emphasises the role of language in sense-making and expressing oneself, according to Taylor (1985). Language can be used to denote both what is happening in the outside world and in our inner world (i.e. feelings and thoughts). In line with this approach, language serves both as a socially communicative act and as a medium for meaningful internal organisation of experiences. Allowing for sense-making of subjective experiences and perceptions, language also enables the individual to self-reflect and self-regulate emotions. Moreover, in expressing oneself in dialectical dialogue with other members of a community, intersubjectivity can develop. In empirical language research, the process of establishing that interlocutors has reached a shared representation of reality in a way that is sufficient for the current purpose is called (common) grounding the utterance (Clark 1996; Kashima, Klein, and Clark 2007). Additionally, the use of language can stimulate the ability to mutually experience the thoughts and emotions of others. Recent evidence on reading demonstrates that experiencing high involvement in reading general fiction, or reading literary fiction in particular, tends to increase one's engagement in empathic ability (Bal and Veltkamp 2013; Kidd and Castano 2013). Empathy, in turn, is positively associated with prosocial and cooperative behaviour (Stocks, Lishner, and Decker 2009).

Both approaches to language substantiate the presumed relation between language development and citizenship. First of all, the designative approach implies that language development is relevant to citizenship as language enables one to describe and discuss objects and ideas in the outside world. As such, the accumulation of citizenship knowledge and discussion of, for example, recent political

events depend at least partly on language ability. Secondly, the expressivist approach emphasises that language development is not only a prerequisite for understanding and giving meaning to the world and oneself, but is also important for self-regulation, (self-)reflection and the development of intersubjectivity, or establishing a shared representation of reality. The development of citizenship is closely associated with the ongoing process of semiotic mediation as citizenship concerns how a person relates to the world. Moreover, by expressing one's own feelings and thoughts and exchanging these with others, one may also be informed on the subjective states of others, which is an important requirement for the prosocial aspects of good citizenship.

In political socialisation theory, the above insights and findings are echoed as well, as well-developed language skills are seen as important in enabling successful citizenship behaviour. For example, in their model of political participation, Brady, Verba, and Schlozman (1995) not only distinguish time, money and civic skills as important resources for political participation. They also stress the importance of language ability, as it enables one to convince, engage and organise others in spoken or written word. For the same reasons, language can be a non-violent means to influence or resolve a dispute or a tense situation. This contributes to a peaceful coexistence of citizens in a plural society. Brady, Verba, and Schlozman (1995) note that the school is an important institution in which these skills are acquired.

In sum, theoretical reasons for assuming an important role for language in the development of citizenship outcomes are provided by various academic fields, ranging from philosophy of language to social cognition science and political socialisation studies. In the next section, the present study will be elaborated upon.

### **The present study**

The aim of the current study is to investigate the relationship between language ability and citizenship outcomes of grade 6 pupils in primary schools. We focus on the citizenship outcomes of primary education pupils, as this can be a potent period for citizenship development in comparison with parts of secondary education. Geijsel et al. (2012) and Cleaver et al. (2005) show that stagnation of or even a dip in citizenship development occurs during early adolescence in citizenship attitudes, personal efficacy and citizenship reflection development, among others. Anticipating this delay or backslide, it might be effective to boost the level of these individual citizenship outcomes in advance, serving as a buffer or facilitating higher growth rates.

In studying the role of language ability in youth citizenship, we control for other measures of cognitive ability, in particular mathematics ability and non-academic intelligence. On the basis of the reviewed literature, we hypothesise that language ability stimulates the development of youth citizenship in a broad sense, including knowledge, skills, attitudes as well as reflection. A strong version of our theory on the importance of language would predict that general intelligence is only associated to citizenship outcomes to the extent that it translates into higher language ability, and that mathematics ability is unrelated to citizenship outcomes once language ability is controlled. A weaker version of our theory would predict that other measures of cognitive ability may have their own partial association to citizenship outcomes, but that the strongest partial association is with language ability.

## **Methods**

### **Data**

The analyses have been performed on the Cohort Research on Educational Careers (Cohort Onderzoek Onderwijsloopbanen, COOL) data, a nationally representative school cohort study in the Netherlands.<sup>1</sup> We used the outcomes of a school-based survey of about 2429 pupils in 138 primary schools (Driessen et al. 2009; Driessen, Mulder, and Roeleveld 2012). The citizenship outcomes constituting our dependent variables are assessed in grade 6. The longitudinal character of the cohort's cognitive ability data

allows us to examine the relationship with level of grade 3 language test scores and growth in language scores between grade 3 and grade 6. The data for grade 3 (language) were collected in 2008, while the data for the same pupils in grade 6 (language and citizenship competences) were collected in 2011. Students were on average 9.4 and 12.4 years old at the respective tests. Both non-urban schools and urban school were well-represented in the data, with 47.8% of students coming from non- or low-urban schools. As missing data rates were low for the longitudinal data (typically <2%, approximately 9% for non-academic intelligence), complete case analyses are conducted.

### **Analytical design**

Given the nested structure of the data, a multilevel analysis was performed for each dependent variable. As the large majority of schools often provided only one class in the data-set, the school and class level were collapsed. Two models were estimated. As compared to model 1, model 2 adds control variables for mathematical ability and non-academic cognitive ability. In addition, a regression analysis with school fixed effects was conducted.

To obtain a precise estimation of the association between language ability and pupils' citizenship outcomes, a number of confounding factors need to be controlled for. At the individual level, several factors have been shown to influence youth citizenship outcomes. For our conceptualisation of youth citizenship in particular, Geijsel and colleagues (2012) have shown that gender, parental ethnicity and parental education contribute to the prediction of youth citizenship outcomes in the Netherlands. Girls tend to score significantly higher on knowledge, attitude, skill and reflection components of citizenship competence, while pupils with higher educated parents appear to particularly benefit from their parents in terms of citizenship knowledge. Interestingly, having a non-Dutch mother is shown to be associated by higher youth citizenship attitude, skill and reflection scores, but lower citizenship knowledge scores (Geijsel et al. 2012). The substantial number of immigrant children in the Dutch educational system therefore necessitates controlling for the influence of ethnicity.

To isolate the effect of language ability, the influence of other aspects of cognitive ability also needs to be taken into account. For that reason, both general intelligence and mathematics ability will be controlled for. Moreover, influences due to the distribution and level of classmate language ability will be controlled for as well. Finally, although a constructivist account of language would suggest some degree of reciprocity between language and youth citizenship development, we assume the language development has a larger influence on youth citizenship outcomes than vice versa, as suggested by the previously discussed literature. The data analyses were conducted using the 64-bit version of the Stata SE 12 package.

### **Measurements**

#### **Dependent variables**

For measurement of youth citizenship outcomes in the COOL data, the Citizenship Competences Questionnaire (ten Dam et al. 2011) was used. This instrument aims to measure citizenship practices as situated in the lives of young people, by putting emphasis on the four citizenship tasks: acting democratically, acting in a socially responsible manner, dealing with conflicts and dealing with differences. Pupils' citizenship attitudes, skills, reflection and knowledge regarding these tasks were tested.

The knowledge test consisted of 27 multiple-choice questions with three response options for each question (dichotomous level of measurement) and the instruction to indicate *which option best answers the question*. For instance: 'All children have a right to: a) an allowance, b) choose who they want to live with or c) education' (correct answer is 'c'). This 27-item scale has a Cronbach's alpha of .83 (ten Dam et al. 2011).



Attitudes, skill and reflection were assessed using survey items rated along four-point Likert-type scales. The general question accompanying the attitude items is *How well does this statement apply to you?* A sample statement would be: *I like knowing something about different religious beliefs.* The basic form of the skill (i.e. self-efficacy) questions is: *How good are you at ...* and then, for instance: *finding a solution which everyone is satisfied with for a disagreement?* The basic form of the reflection questions is: *How often do you think about* (for instance) *whether pupils are listened to at your school?* The 24-item attitude scale has a Cronbach's alpha of .90, the 15-item skills scale has Cronbach's alpha of .85 and the 28-item reflection scale has a Cronbach's alpha of .94 (ten Dam et al. 2011).

As such, the four dependent variables used here are *citizenship attitudes*, *citizenship skills*, *citizenship reflection* and *citizenship knowledge* in grade 6. As the instrument has been designed for pupils in grade 6 and above, dependent variables are not available for grade 3. The scores on all four dependent variables are *z*-standardised.

### Independent variables

At the individual level, two independent variables were selected to measure language ability. *Individual language ability in grade 3* is based on a standardised reading comprehension test developed by national testing agency Cito. *Growth in language ability* is measured by subtracting the reading comprehension score in grade 3 from the reading comprehension score attained in grade 6. These two measures are negatively correlated ( $r = -0.226$ ). The Cito language ability tests are part of a nationally standardised achievement test and are commonly used to monitor academic achievement in primary schools and for track placement in secondary education. All independent variable scores were *z*-standardised; the growth variables were standardised after calculating the differences between the raw ability scores. By including both language ability from grade 3 and growth in language ability, potential influence from non-controlled confounding factors is reduced, while explicitly modelling the influence of change in language ability.

### Control variables

To exclude variance caused by other factors than pupils' language ability, the control variables *gender* (0 = male, 1 = female), *parental ethnicity* (0 = both parents were born in the Netherlands, 1 = one or both parents were born outside the Netherlands) and *parental education* were included. For the latter, three categories denoting the highest level of education completed were included: pre-vocational education (1), general/vocational secondary education or senior vocational education (2) and higher education (3).<sup>2</sup>

For the same reason, mathematics ability and non-academic cognitive ability are included as control variables as well. *Level of mathematics ability in grade 3* is measured by the score on a standardised mathematics test, which was also developed, validated and standardised by the Dutch national testing agency Cito. *Growth in mathematics ability* is measured by the difference between mathematical ability score in grade 3 and the mathematical ability score attained in grade 6 by individual pupils.

To further control for the possible effect of general cognitive ability on citizenship outcomes, an intelligence measure designed to measure *non-academic cognitive ability* (henceforth, *NACAT*) is included in the analyses. The *NACAT* (or *NSCCT*, in Dutch) measures intelligence for primary school children and is a nationally standardised and validated test that was administered in grade 3 (Batenburg and van der Werf 2004).

Finally, average school level and variation of school level of language ability in grade 3 are controlled for by aggregating individual language scores into school averages and school standard deviations. These variables are called *Class average reading ability* and *Class SD reading ability*, respectively. Descriptives of all variables included in the analysis are provided in Appendix A.



## Results

As can be seen in Table 1, school- and class-level factors explain a minor proportion of variance. It appears that factors at the individual level within classes explain the large majority of variance for all four citizenship outcomes, particularly for reflection.

Gender is significantly correlated with all dependent variables, with girls scoring particularly higher on citizenship attitudes. Interestingly, the variables indicative of the class language environment are not found to be significant for any of the citizenship outcomes. For all variables, the model fit of model 1 improves significantly compared to the null model. Model 2 fit only improves model fit significantly compared to models 1 for citizenship knowledge. In the next section, the separate results for each of the outcomes variables will be reported in greater detail.

As can be seen in Table 2, individual language ability and growth of language ability are significantly correlated with citizenship attitudes. In addition, both ethnicity and the educational level of pupils' parents are significantly associated with pupils' citizenship attitudes.

Individual language ability and growth in language ability are significantly correlated with citizenship knowledge as well (Table 3). The ethnic background and educational level of the parents do not have significant effects on pupils' citizenship knowledge. Moreover, individual mathematical ability and growth of mathematical ability are significantly associated with citizenship knowledge.

Similar to citizenship attitudes, citizenship reflection is associated with the ethnicity and educational level of pupils' parents. While individual language ability in grade 3 is not significantly correlated with citizenship reflection in grade 6, growth in language ability between grade 3 and 6 is significantly associated with citizenship reflection (see Table 4).

**Table 1.** Intraclass correlations for the four citizenship outcomes.

	Attitudes	Skills	Reflection	Knowledge
Individual level	.87	.89	.92	.90
School level	.13	.11	.08	.10

Note: The school and class level are collapsed.

**Table 2.** Regression coefficients for citizenship attitudes.

	Model 1		Model 2	
<i>Fixed effects</i>				
Constant	-.271***	(0.129)	-.273***	(0.131)
<i>Individual level</i>				
Gender	0.372***	(0.040)	0.371***	(0.043)
Educational level of parents	0.088**	(0.030)	0.091**	(0.031)
Ethnic background	0.427***	(0.066)	0.428***	(0.066)
Language ability grade 3	0.164***	(0.024)	0.182***	(0.030)
Growth in language ability	0.130***	(0.022)	0.144***	(0.025)
Mathematics ability grade 3			-0.019	(0.040)
Growth in mathematics ability			-0.031	(0.031)
Non-academic cognitive ability			-0.024	(0.028)
<i>Class level</i>				
CA language ability grade 3	-0.056	(0.042)	-0.058	(0.042)
SD language ability grade 3	0.063	(0.043)	0.064	(0.043)
<i>Random effects</i>				
Level 1 variance	0.785	(0.025)	0.786	(0.026)
Level 2 variance	0.083	(0.019)	0.083	(0.018)
Observations	2023		2023	
Deviance	2699.7		2706.6	

Note: Fixed coefficients are followed by their standard error. CA = classroom average, SD = standard deviation; standard errors in parentheses.

Source: COOL waves 2008 and 2011. All continuous variables are z-standardised, classroom variables are z-standardised at the classroom level.

\*\* $p < 0.01$  \*\*\* $p < 0.001$ .

**Table 3.** Regression coefficients for citizenship knowledge.

	Model 1		Model 2	
<i>Fixed effects</i>				
Constant	-0.206	(0.114)	-0.268*	(0.115)
<i>Individual level</i>				
Gender	0.174***	(0.036)	0.226***	(0.038)
Educational level of parents	0.045	(0.027)	0.027	(0.027)
Ethnic background	-0.085	(0.058)	-0.084	(0.058)
Language ability grade 3	0.450***	(0.021)	0.368***	(0.026)
Growth in language ability	0.283***	(0.020)	0.222***	(0.022)
Mathematics ability grade 3			0.172***	(0.035)
Growth in mathematics ability			0.120***	(0.028)
Non-academic cognitive ability			0.021	(0.025)
<i>Class level</i>				
CA language ability grade 3	-0.018	(0.035)	-0.009	(0.035)
SD language ability grade 3	0.005	(0.035)	0.007	(0.035)
<i>Random effects</i>				
Level 1	0.628	(0.020)	0.618	(0.020)
Level 2	0.052	(0.013)	0.051	(0.013)
Observations	2023		2023	
Deviance	2465.4		2457.4	

Note: Fixed coefficients are followed by their standard error. CA = classroom average, SD = standard deviation; standard errors in parentheses.

Source: COOL waves 2008 and 2011. All continuous variable scores are standardised.

\* $p < 0.05$  \*\*\* $p < 0.001$ .

**Table 4.** Regression coefficients for citizenship reflection.

	Model 1		Model 2	
<i>Fixed effects</i>				
Constant	-0.997***	(0.134)	-1.034***	(0.136)
<i>Individual level</i>				
Gender	0.226***	(0.043)	0.241***	(0.046)
Educational level of parents	0.081*	(0.032)	0.081*	(0.032)
Ethnic background	0.383***	(0.067)	0.396***	(0.068)
Language ability grade 3	0.043	(0.026)	0.046	(0.032)
Growth in language ability	0.042	(0.023)	0.056*	(0.026)
Mathematics ability grade 3			-0.003	(0.042)
Growth in mathematics ability			-0.060	(0.033)
Non-academic cognitive ability			-0.016	(0.030)
<i>Class level</i>				
CA language ability grade 3	0.009	(0.039)	0.005	(0.039)
SD language ability grade 3	0.024	(0.039)	0.029	(0.039)
<i>Random effects</i>				
Level 1	0.897	(0.029)	0.896	(0.029)
Level 2	0.053	(0.014)	0.052	(0.014)
Observations	2023		2023	
Deviance	2815.5		2820.2	

Note: Fixed coefficients are followed by their standard error. CA = classroom average, SD = standard deviation; standard errors in parentheses.

Source: COOL waves 2008 and 2011. All continuous variable scores are standardised.

\* $p < 0.05$  \*\*\* $p < 0.001$ .

Both individual language ability and growth in language ability are significantly associated with citizenship skills in grade 6 (see Table 5). While educational level of pupils' parents is not significantly correlated with citizenship skills, the pupils' ethnic background is substantially associated with citizenship skills scores. In addition, the school fixed effects regression showed similar results as reported above in terms of significance and size of the various associations.

**Table 5.** Regression coefficients for citizenship skills.

	Model 1		Model 2	
<i>Fixed effects</i>				
Constant	-0.983***	(0.135)	-0.998***	(0.137)
<i>Individual level</i>				
Gender	0.257***	(0.043)	0.269***	(0.046)
Educational level of parents	0.051	(0.032)	0.051	(0.032)
Ethnic background	0.385***	(0.068)	0.384***	(0.069)
Language ability grade 3	0.098***	(0.025)	0.111***	(0.031)
Growth in language ability	0.102***	(0.023)	0.110***	(0.026)
Mathematics ability grade 3			0.016	(0.042)
Growth in mathematics ability			-0.014	(0.033)
Non-academic cognitive ability			-0.048	(0.030)
<i>Class level</i>				
CA language ability grade 3	-0.031	(0.041)	-0.031	(0.041)
SD language ability grade 3	0.028	(0.042)	0.030	(0.042)
<i>Random effects</i>				
Level 1	0.885	(0.029)	0.885	(0.029)
Level 2	0.070	(0.018)	0.070	(0.018)
Observations	2023		2023	
Deviance	2810.9		2817.1	

Note: Fixed coefficients are followed by their standard error. CA = classroom average, SD = standard deviation; standard errors in parentheses.

Source: COOL waves 2008 and 2011. All continuous variable scores are standardised.

\*\*\* $p < 0.001$ .

## Conclusions

Stimulating language and citizenship development are both central goals of education today. So far, the relation between these two has received little attention in the literature. The aim of this study was to gain insight into the role of language ability in youth citizenship knowledge, skills, attitudes and reflection of grade 6 pupils in primary education. Our main findings show that language ability is strongly associated with positive youth citizenship outcomes, in line with our hypothesis. That this relationship holds specifically for language ability, rather than other aspects of cognitive ability such as general intelligence and mathematics ability, is further supported by our analyses showing that both past language ability and growth in language ability are significant for nearly all citizenship outcomes. Interestingly, the magnitude of the correlation of language ability with the four outcomes differs. In particular, citizenship attitudes and knowledge are strongly correlated with language ability.

What might explain these differences? Presumably, the mechanisms underlying the indirect effects of language ability on attitude formation, knowledge acquisition, skills development and of reflection processes are of a different nature. Citizenship attitudes frequently concern norms on how to treat others and how to relate to society. Therefore, the influence of language ability may be larger, as language enables one to develop a shared understanding of reality and to discuss emotions, norms and values in interaction with others (Kashima, Klein, and Clark 2007; Taylor 1985). Higher language ability is also associated with empathic engagement, which is an important citizenship attitude, among other relevant for dealing with others in a prosocial manner (Astington and Jenkins 1999; Kidd and Castano 2013; Milligan, Astington, and Dack 2007). In addition, language ability may be strongly associated with citizenship knowledge, as such knowledge is typically acquired verbally or in written form. Knowledge construction is a dynamic, active and collaborative process in which learners constantly strive to make sense of new information (Afflerbach 1990; Driver et al. 1994; Taboada and Guthrie 2006). Language ability facilitates this process. Given that the acquisition of a citizenship skill is relatively complex compared to the other citizenship outcomes, as it draws on knowledge, contextual awareness and experience, a relatively weaker relationship with language ability can be explained. Remarkably, citizenship reflection is the only citizenship outcome that demonstrates a modest correlation with just growth in language ability. From an expressivist perspective of language, this result is surprising, as

language ability is seen as a constitutive element for reflection. Nevertheless, this result coincides with earlier empirical findings (Geijsel et al. 2012) showing only a small effect of educational level on the reflection component of citizenship. This finding may be explained by the type of language teaching that typically takes place in primary schools, which typically lacks reflective and critical educational practices (Starkey 2005).

In this study, we have controlled for the peer language environment. Both class average language ability and the variation of language ability within a class are not significantly associated with the citizenship outcomes, suggesting that the peer language environment in classes does not play a major role in citizenship development. As such, a direct effect of the language environment in schools has not been demonstrated, although the analytical design of this study is not sufficiently strong to unequivocally demonstrate (absence of) such compositional or peer effects (Sacerdote 2014).

In addition to language ability, non-academic cognitive ability may also influence pupils' citizenship. To our knowledge, this relation has not been studied to date. In the present study, our findings show no significant association between non-academic cognitive ability and any of the four citizenship outcomes. One potential explanation is that such a relationship is indeed lacking within a normal range of intelligence as we have used data from pupils in regular classes. However, an alternative explanation would be that the outcomes of fluid intelligence may have been captured already, by the inclusion of the language ability, language ability growth, mathematics ability and mathematics ability growth variables (Gray 2006; Sternberg and Sternberg 2009). In addition, it is surprising that the inclusion of the mathematics ability control variables does not yield a different overall picture. Both control variables are not significantly associated with citizenship attitudes, reflection and skills. This demonstrates the importance of distinguishing between language ability and mathematics ability when studying the effects of cognitive ability on citizenship outcomes.

Although it may appear that a simple rise in language ability would result in higher citizenship outcomes, we would like to caution against generalising this finding without consideration for the schools' citizenship education practices. After all, in addition to being exposed in greater or lesser degree to citizenship education programmes, pupils encounter multiple perspectives in interaction with peers and teachers in schools, which is an important factor for citizenship development (Geboers et al. 2013). Moreover, especially in primary education, teachers often pay explicit attention to the social development of their pupils by attempting to create a learning climate characterised by mutual respect and room for dialogue. Several studies regarding adolescents have shown that such a school climate enhances pupils' citizenship (e.g. Finkel and Ernst 2005; Flanagan et al. 1998; Gniewosz and Noack 2008; Torney-Purta 2002). Such factors might be necessary conditions for the relationship between language ability and citizenship development to exist. On the other hand, our findings suggest that taking pupils' individual language ability levels into account may further increase the positive effects of discussion in an open classroom climate using preparatory small-group discussion before moving on to plenary discussion of the topic at hand, for example.

A limitation of our study is that the statistical analysis does not allow for the establishment of a causal relationship, as data on the pupils' citizenship outcomes in grade 3 were not available. Rather, we have offered various lines of research that suggest a positive influence of language ability on citizenship outcomes (Astington and Jenkins 1999; Brady, Verba, and Schlozman 1995; Taylor 1985). As such, we consider it likely that language ability is predictive of pupils' citizenship outcomes, although further research is required to establish a causal link. A reciprocal relationship, in which growth in language ability is stimulated by an open and safe social context, might also be present. An additional limitation is that our operationalisation of language ability utilises a reading comprehension measure, which indicates command of academic Dutch. Future research might include more aspects of language proficiency, such as conversational, expressive and non-native language abilities. To assess the impact of education on the relationship between language ability and youth citizenship development, additional classroom variables such as method of language teaching may be included. We welcome mixed methods studies that may further scrutinise the mechanisms at play. One might expect different effects

on citizenship outcomes for language instruction that focuses on comprehension and takes pupils' experiences and meanings into account compared to instruction that aims to improve technical reading, for instance. Some authors even argue that education for democratic citizenship should be much more strongly integrated in language teaching (Starkey 2005). As such, future research may also focus on which type of language education is most beneficial for the development of citizenship outcomes.

Finally, our findings have a number of implications for educational practice. First of all, our results can be taken as evidence that a trade-off between development of cognitive abilities and development of youth citizenship, so often taken for granted, does not exist for language ability at the individual level. This must be interpreted as good news for educators struggling with curriculum overload, who may see an opportunity to combine these two educational goals more efficiently. Secondly, while in recent years more empirical studies have been conducted, relatively little is known about educational effectiveness with regard to citizenship education (Dijkstra et al. 2014; Geboers et al. 2013). As schools are increasingly expected to contribute to the citizenship development of pupils, the importance of informing school practices with empirical insight is growing. Our findings suggest that interventions might improve their effectiveness when they take the role of language ability in citizenship development into consideration. Vice versa, we join Starkey (2005) in suggesting that language teaching may also be geared more towards equipping pupils with linguistic tools for dealing with specific citizenship situations. Indeed, such integration of democratic citizenship education content in language teaching may also make language learning more personally relevant for pupils, growing two trees from one seed.

## Notes

1. The COOL study is funded by The Dutch Organisation for Scientific Research (NWO) and the Dutch Ministry of Education, Culture and Science.
2. In our Dutch sample, these levels are operationalised as pre-vocational education, consisting of primary education (LO, BaO) and lower pre-vocational education (VBO)(1); general (HAVO, VWO) and vocational (MAVO) secondary education, senior vocational education (MBO)(2); and higher education (HBO/WO)(3) as the highest levels of education completed by one or more parents.

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## Appendix A. Descriptives

Table A1. Summary statistics for COOL (I).

Variable	Mean	SD	Min	Max
<i>Dependent variables</i>				
Citizenship attitudes	0	1.00	-4.55	2.40
Citizenship skills	0	1.00	-4.97	2.40
Citizenship reflection	0	1.00	-2.22	3.00
Citizenship knowledge	0	1.00	-4.50	1.44
<i>Independent variables</i>				
Language ability grade 3	0	1.00	-1.85	5.58
Growth in language ability	0	1.00	-3.80	5.05
<i>Control variables</i>				
Mathematics ability grade 3	0	1.00	-5.66	3.58
Growth in mathematics ability	0	1.00	-4.81	4.53
Non-academic cognitive ability	0	1.00	-4.59	1.97
Class average reading ability	0	1.00	-3.22	5.65
Class SD reading ability	0	1.00	-3.69	4.69

Note: All independent and dependent variables in the above table were *z*-standardised.

Table A2. Summary statistics for COOL (II).

Variable	Frequency
<i>Control variables</i>	
Gender	
Female	1044
Male	979
Educational level of parents	
Pre-vocational education	479
General/vocational secondary education	891
Higher education	653
Ethnic background	
Migrant	376
Non-migrant	1647
Total	2023

Notes: The exact coding of the variables was as follows: *Ethnic background* (0 = both parents were born in the Netherlands, 1 = one or both parents were born outside the Netherlands) and *Educational level of parents* (1 = pre-vocational education, 2 = general/vocational secondary education or senior vocational education and 3 = higher education. SD = standard deviation.