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Measuring Young People's Citizenship Competences

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Introduction

Citizenship has been introduced in the curriculum of almost every European country (Eurydice, 2005), the US (Torney-Purta *et al.,* 2001), Canada (Osborne, 2001), and Australia (Print & Gray, 2000). Reference is made to politics and to non-political social interaction. In both, citizenship concerns the agency of individuals. Although attention is increasingly being paid to citizenship education, instruments to determine its effects on students are scarce. Insight into what young people learn about citizenship at school and into the differences between schools and students is lacking. Available instruments address only subcomponents such as critical thinking, moral judgement, social skills, and concern for others (Ten Dam & Volman, 2007). Questionnaires with a broader conceptualisation were developed in the IEA Civic Study by Torney-Purta (2002; Torney-Purta *et al.*, 2001) and the English NFER research (Cleaver *et al.*, 2005; Ireland *et al.*, 2006; Kerr *et al.*, 2007) to gain insight into the knowledge and cognitive capacities that students need for political engagement and democratic attitudes. Neither focus on their overall *capacity to act* in *social* situations. In this article, we develop an instrument to measure young people's citizenship competences.

Citizenship Development and Education

'Civil society' is increasingly mentioned in recent literature (Oser & Veugelers, 2008). This domain is generally opposed to the State and the market economy and points to the social connections between citizens in which values and cultural meanings are exchanged and institutionalised (Alexander, 2006). This is of critical importance to define citizenship, as it concerns not only social cohesion, but also the development of individuals, norms, and values. Citizenship is given specific forms in each society and many authors emphasise the democratic and pluriform character of society (Glass, 2000; Haste, 2004; Holmes, 2001; Kerr, 1999; Naval, Print, & Veldhuis, 2002; Print & Coleman, 2003; Torney-Purta, 2004). Democracy is primarily construed as 'a mode of associated living' (Dewey, 1966) in which being able to move in heterogeneous contexts such as work, home, street, and club is of major importance. Visions of citizenship can vary considerably, particularly with respect to the adoption of norms for a democratic way of life. Westheimer and Kahne (2004) make a distinction between the 'personally responsible citizen', the 'participatory citizen', and the 'social-justice citizen'. On the basis of research into the goals of citizenship education, Leenders and Veugelers (2006) make a distinction between 'adaptive citizenship', 'individualistic citizenship', and 'critical democratic citizenship'. In both studies, a plea is made for a conceptualisation that goes beyond 'being nice', 'consideration of others', 'helping others', 'caring for each other', etc. In a democratic and pluriform society, citizens must make their own critical contributions (Wardekker, 2001). 'Good citizenship' therefore implies that they can critically evaluate different perspectives, explore strategies for change, and reflect on issues of justice, (in)equality and democratic engagement (Westheimer, 2008).

However, all authors agree that a capacity to function in a socially accepted and responsible manner in a community is also part of 'good citizenship'.

Young People's Citizenship Competences

Lawy and Biesta (2006; Biesta, 2007) made a distinction between citizenship-as-outcome and citizenship-as-practice. In the first view, the central question is the baggage that young people must acquire to participate as adults in society. A legal conceptualisation fits into this vision and elements can be detected in the IEA and NFER studies. Citizenship-as-practice emphasises that young people learn to be citizens and interact with others via participation in social and cultural practices that are part of their daily lives (e.g. family, leisure, school, work) (Lawy & Biesta, 2006). Hence, they become acquainted with the world and learn to interpret it (Haste, 2004). Schools can therefore be seen as a 'secondary apprenticeship system' (Ten Dam, Volman, & Wardekker, 2004): they help to reflect on social and cultural practices to improve the quality of the capacity to act as a citizen. Their function should not be the learning of isolated knowledge and skills, but the learning of competences.

The distinction between the capacity to act as a citizen and acting is also made in OECD's *Definition and Selection of Competencies* (Rychen & Salganik, 2003). It lays the foundation to measure the competences that citizens of a democratic European society need for 'a successful life and a well-functioning society'. 'Competence' refers to people's capacity to act in different situations. Its internal structure is then defined in terms of underlying knowledge, attitude, and skill components. In the research literature, however, there are no empirical indications of their importance, but the importance of attitudes is frequently emphasised in arguments on moral education and citizenship (Higgins-D'Alessandro, 2008; Power & Power, 2008).

In their study of citizenship education, Schuitema, Ten Dam and Veugelers (2008) analyse the types of knowledge, attitudes, and skills that citizens should have in society today. With respect to knowledge, this entails insight into the functioning of a democratic society (Hicks, 2001; Kerr, 1999), i.e. knowledge of government, the constitution, and civil rights. With regard to types of skills, being able to change perspectives and communication skills is seen as important (Battistoni, 1997; Beane, 2002). Important attitudes are respect, tolerance, responsibility, social involvement, and appreciation of people's differences (Grant, 1996; Cogan & Morris, 2001). From the viewpoint that 'good citizenship' *also* entails being able to make a critical contribution to society, 'reflection' constitutes an important component of modern citizenship (Ten Dam & Volman, 2004). Rychen and Salganik (2003) assume that this dictates a person's level of competence. But empirical insight into its role in a person's citizenship competences is lacking.

Measurement Instrument for Citizenship Competences

This study develops a construction of this conceptualisation of citizenship competences. The complexity of this endeavour is the operationalisation of two 'container concepts': young people's citizenship and their competences. With regard to citizenship, a social cultural perspective as practice is taken as the starting point. Citizenship education is seen as adding to the development of young people's competences which enable them to perform their *social tasks* in everyday life (Ten

Dam & Volman, 2007). Based on a review of the literature on 'citizenship competences', Ten Dam *et al.* (2010) consider four social tasks of students' citizenship practices: acting democratically, acting in a democratic responsible manner, dealing with differences and dealing with conflicts. The central question is the competences that young people need to fulfil these tasks.

With regard to competences and the elaboration of their internal structure, the view that 'good citizenship' encompasses being able to function in a socially accepted manner and make a critical contribution to society is taken as the starting point. Hence, the knowledge, attitudes, skills, and reflection that are needed to fulfil these social tasks in a socially accepted and critical way need to be identified. Definitions of these components were derived by the authors of this article from Ten Dam and Volman's (2007) review on citizenship and education. It was decided that a 'change of perspective' was primarily a 'skill' needed for 'dealing with differences', whilst 'entering into a dialogue' was an 'attitude' needed for 'acting democratically'. The selection of four social tasks and tentative definitions of the knowledge, attitudes, skills, and reflection required per social task were then presented to experts from primary and secondary education in The Netherlands, the Dutch Educational Inspectorate, and educational scientists who judged them to be representative for the practices of young people between the ages of 11 and 16. Table I presents an overview.

The 16 definitions were considered as jointly representing students' citizenship competences and were divided into items for a *student questionnaire* to measure these *competences*. A *teacher questionnaire* was also developed to measure students' citizenship *behaviour*. In this article, we present the analyses of the construct validity of the student questionnaire which will be established via the extent to which the instrument measures the separate components of citizenship competence and social tasks and how these interrelate.

Method

Respondents

The instrument was evaluated in pilot rounds. For the final round, the questionnaire was part of a nationwide cohort study of students aged 5 to 18 in The Netherlands (COOL$^{5-18}$). The sample (N = 16,000) includes students in grades 6 (11–12 years) and 9 (14–15 years). An overview is presented in Table II.

Instrument

Face Validity and Content Validity

The matrix in Table I develops the instrument. For each of the 16 tentative definitions (i.e. the cells of the matrix), a set of items was formulated. The knowledge items entailed multiple-choice questions with three response options; together, they formed a test. The attitude, skill, and reflection items with accompanying four-point Likert scales were placed in a survey. The different sets of items were presented to the expert group which was asked to judge whether each set encompassed the conceptual content of the relevant cell.

Pilot Studies

The first version of the measurement instrument was tested in two pilot studies conducted in 2005 and 2006 with some 1000 students in primary or secondary education. The internal structure used reliability and confirmatory factor analyses.

TABLE I. Initial definitions of citizenship competences in terms of components and social tasks

COMPONENTS / SOCIAL TASKS	**Knowledge** knowing, under-standing, insight	**Attitudes** thoughts, desires, willingness	**Skills** estimate of what one can do	**Reflection** contemplation of topics
	A young person with such knowledge . . .	A young person with such attitudes . . .	A young person with such skills . . .	A young person with such reflection . . .
Acting democratically Acceptance of and contribution to a democratic society.	. . . knows what democratic principles are and what acting in accordance with them involves.	. . . *wants to hear everyone's voice, enter into a dialogue and make an active, critical contribution.*	. . . is able to assert own opinion and listen to the opinions of others.	. . . thinks about issues of democracy, power/ powerlessness, equal/unequal rights.
Acting in a socially responsible manner Taking shared responsibility for the communities to which one belongs.	. . . knows social rules (i.e. legal or unspoken rules for social interaction).	. . . wants to uphold social justice, is prepared to provide care and assistance, does not want to harm another or the environment as a result of his or her behaviour.	. . . can adopt a socially just position.	. . . thinks about conflicts of interest, social cohesion, social processes, group processes (e.g. inclusion, exclusion), and own contribution to social justice.
Dealing with conflicts Handling of minor situations of conflict or conflicts of interest to which the child is a party.	. . . knows methods to solve conflicts such as seeking win-win solutions, calling in help from others, admission of mistakes, prevention of escalation.	. . . is willing to explore conflicts, prepared to consider the standpoint of another, jointly searches for an acceptable solution.	. . . can listen to others, put oneself in someone else's place, seek win-win solutions.	. . . thinks about how a conflict can arise, the role of others and oneself, and the possibilities to prevent or solve conflicts.
Dealing with differences Handling of social, cultural, religious, and outward differences.	. . . is familiar with cultural differences, has knowledge of rules of behaviour in different social situations, knows when one can speak of prejudice or discrimination.	. . . has a desire to learn other people's opinions and lifestyles, has a positive attitude towards differences.	. . . can adequately function in unfamiliar social situations, adjust to the desires or habits of others.	. . . thinks about the nature and consequences of the differences between people and cultural backgrounds for behaviour and processes of inclusion and exclusion.

TABLE II. Distribution of pupils from the COOL sample (N = 16000; 916 classes)

		N	%
Sex	Boys	7984	50 %
	Girls	7899	50 %
Primary vs. Secondary Education	Primary education	12105	76 %
	Secondary education	3845	24 %
Social-economic Status	Maximum parental education: lower vocational	2948	20 %
	Maximum parental education: advanced vocational	6417	44 %
	Maximum parental education: college/university	5097	35 %
Maternal country of birth	Netherlands	10160	73 %
	Turkey	982	7 %
	Morocco	888	6 %
	Suriname	396	3 %
	Netherlands Antilles	151	1 %
	East European country or other Western country	423	3 %
	Other non-Western country	869	6 %
Degree of urbanisation of school location	Very strongly urban	3414	21 %
	Strongly urban	4145	26 %
	Moderately urban	3321	21 %
	Not very urban	5055	32 %
School denomination	Public	5285	33 %
	Roman Catholic	4990	31 %
	Protestant	3518	22 %
	Islamic	312	2 %
	Other	1698	11 %

Some items were reformulated. Others were removed because of high correlations with an unintended factor. Items that were answered differently by certain groups but did not depend on the characteristic to be measured were also removed, as were items that seemed particularly sensitive to social desirability. These unintended effects can be referred to as 'differential item functioning' (item bias) and they were removed for validity purposes (Mellenbergh, 2005). The knowledge items were selected on the basis of an optimal p value (.70) for items with three response alternatives so that a maximum variation and guessing were considered. The response alternatives (wrong answers) were also analysed. No alternative seemed to correlate outside the range of –.10 to .10 with the sum of correct answers.

A second version was compiled on the basis of these analyses. The factor structure differed from the original matrix on two points. First, the items that measured 'skill — acting democratically' were not found to be unidimensional, i.e. the items loaded on two distinct skills, namely 'able to assert own opinion' and 'able to listen to the standpoints of others'. Hence, it was decided to distinguish between the two. The second point of departure was the very high correlation between the items that measured 'skill — acting in a socially responsible manner' and those that measured 'skill — dealing with conflicts'. Since both concern very similar skills, the items were combined into a single scale to measure 'skills — acting in a socially responsible manner and dealing with conflicts'. This version was then tested in 2007 in a third pilot study that included 1116 primary school students and 113 secondary school students. Confirmatory factor analyses showed that the internal structure of the data corresponded to the measurement intentions

and decisions made earlier. The content of the scales was again evaluated by the group of experts in light of the theoretical framework. 'Desire to make a critical contribution' as part of the definition of 'attitude — acting democratically' seemed to be insufficiently represented in the questionnaire. Hence, several new attitude items were tested in a fourth pilot test that only considered the attitude component in 2007 with 294 primary education students and 226 secondary education students. These analyses showed that items regarding 'attitude — acting democratically' now represented two clearly interpretable factors, namely: 'desire to hear what everyone has to say' and 'desire to make a critical contribution'.

The Instrument

The present instrument contains 94 items across 17 scales that pertain to one of the components of citizenship competence per social task (see http://home.medewerket.uva.nl/g.t.m.tendam/page3.html).

- The *knowledge items* concern knowing, understanding, and having insight into what can best be done with respect to the four social tasks. Students choose the best response for an item such as: *All children have a right to*: a) *an allowance*, b) *choose who they want to live with*, or c) *education*. The correct answer is 'c' and is thus assigned a value of 1; the other alternatives are assigned a value of 0 (dichotomous level of measurement).
- The *attitude items* concern opinions, desires, and readiness with respect to the four social tasks. The phrasing of the question is: *How well does this statement apply to you?* A sample statement is: *I like knowing something about different religions*. The response options are: 1) *does not apply at all to me, 2) does not apply much to me, 3) applies a fair amount to me*, or 4) *applies completely to me*.
- The *skill items* concern the estimation of one's skills with respect to the four social tasks. The phrasing of the question is: *How good are you* at, for instance, *finding a solution that everyone is satisfied with for a conflict*? The response options are: 1) *not good at all*, 2) *not very good*, 3) *pretty good,* or 4) *very good*.
- The *reflection items* concern contemplation of the four social tasks. The phrasing of the question is: *How often do you think about*, for instance, *whether students are listened to at your school?* The response options are: 1) *(almost) never*, 2) *only occasionally*, 3) *fairly frequently, or 4) frequently*.

All were formulated positively. To prevent or detect any response biases on the part of the students, additional items — including negative items — were incorporated in the survey, but not in the scales. Finally, the questionnaire contains questions on the students' background. Administration instructions for teachers are provided, as well as information about anonymity for the respondents. Table III shows the reliability coefficients, number of items, and descriptive statistics for the 17 scales.

Analyses

Confirmatory factor analyses were conducted to determine whether the structure in the data corresponded to the structure expected on theoretical grounds and thus whether scales could be developed on the basis of the factor results. The analyses were conducted with the M*plus* programme (Muthèn & Muthèn, 2004). In keeping with the conceptual definition of students' citizenship competences, we constructed 17 scales and determined how far these jointly provided reliable indications on the four components of citizenship competences and the four social

TABLE III. Reliability coefficients (Cronbach's α), number of items (n), mean scale scores (m),[1] and standard deviations (sd) for the 17 citizenship competence scales across the entire COOL dataset (N = 16000)

Components / Social tasks	Knowledge	Attitudes	Skills	Reflection
Acting democratically	K-ad α = .67 (n = 8) m = .80 (sd = .22)	A-ad1[2] α = .70 (n = 3) m = 3.30 (sd = .50) A-ad2[4] α = .65 (n = 3) m = 2.75 (sd = .65)	S-ad1[3] α = .72 (n = 3) m = 3.14 (sd = .5) S-ad2[5] α = .68 (n = 3) m = 3.01 (sd = .54)	R-ad α = .80 (n = 6) m = 2.34 (sd = .63)
Acting in a socially responsible manner	K-asr α = .54 (n = 6) m = .80 (sd = .22)	A-asr α = .68 (n = 6) m = 3.10 (sd = .47)	S-asr/dc α = .76 (n = 5) m = 2.98 (sd = .50)	R-asr α = .84 (n = 6) m = 2.20 (sd = .69)
Dealing with conflicts	K-dc α = .62 (n = 7) m = .71 (sd = .25)	A-dc α = .79 (n = 6) m = 2.84 (sd = .54)		R-dc α = .89 (n = 8) m = 2.49 (sd = .67)
Dealing with differences	K-dd α = .63 (n = 6) m = .77 (sd = .24)	A-dd α = .85 (n = 6) m = 2.85 (sd = .62)	S-dd α = .67 (n = 4) m = 3.04 (sd = .48)	R-dd α = .85 (n = 8) m = 2.06 (sd = .67)

[1] The knowledge scale varied between 0 and 1; the attitude, skill and reflection scales varied between 1 and 4; [2] desire to hear what everyone has to say; [3] is able to assert own opinion; [4] desire to make a critical contribution; [5] listen to the opinions of others

tasks that represent citizenship practices (8 scales). Table IV presents the initial correlations between the 17 scales (based on confirmatory factor analyses).

TABLE IV. Correlations between citizenship competence scales (based on confirmatory factor analyses)

	K ad	K asr	K dc	K Dd	A ad1	A ad2	A asr	A dc	A dd	S ad1	S Ad2	S asr/dc	S Dd	R ad	R asr	R dd
K-ad																
K-asr	.78															
K-dc	.74	.95														
K-dd	.81	.61	.67													
A-ad1	.29	.29	.37	.24												
A-ad2	.09	.17	.23	.08	.62											
A-asr	.15	.35	.43	.11	.75	.75										
A-dc	.13	.28	.40	.07	.62	.57	.78									
A-dd	.12	.19	.26	.09	.53	.70	.70	.52								
S-ad1	.17	.06	.05	.20	.45	.45	.33	.22	.31							
S-ad2	.12	.24	.30	.06	.64	.54	.69	.77	.55	.32						
S-asr/dc	.09	.23	.31	.07	.57	.54	.71	.80	.53	.38	.84					
S-dd	.18	.27	.30	.16	.61	.53	.69	.64	.56	.44	.79	.78				
R-ad	−.07	.07	.11	−.08	.40	.63	.56	.48	.58	.32	.50	.53	.48			
R-asr	−.05	.11	.18	−.06	.39	.61	.61	.49	.58	.21	.46	.51	.43	.84		
R-dc	.14	.22	.31	.12	.44	.47	.57	.59	.48	.23	.50	.58	.48	.65	.72	.67
R-dd	−.02	.07	.13	−.01	.33	.48	.47	.37	.52	.20	.35	.40	.35	.71	.83	

The scales correlate highly per knowledge, attitude, skill, or reflection component (>.50) and sometimes extremely highly (K-asr with K-dc: .95). The exception is 'skill — acting democratically 1: Is able to assert own opinion', which only correlated between .32 and .44 with the other three. The interrelations between the scales per social task varied much more. The knowledge and reflection scales correlated least strongly per social task (<.30 for K-dd with R-dd was not significant). The correlations between the attitude and the skill scales per social task reached .80 (A-asr with S-asr/dc).

The fit of eight factor models with the knowledge, attitude, skill, and reflection components or social tasks as second-order factors to explain the correlations between the scales per component or social task, respectively, was examined. The factor models represent the columns (competences) and rows (social tasks) of the matrix in Table I. The second-order factor model for the knowledge component studied how far the knowledge items loaded on the four knowledge subfactors and how far these loaded on the main knowledge factor.

Due to the recruitment of school classes and clustered sample selection, the dependency in the data was taken into consideration for the continuous items (the

attitude, skill, and reflection items) in the calculation of the standard errors and, thus, the testing. The parameters were estimated using the 'maximum likelihood R' method (MLR). For the dichotomous knowledge items, the 'weighted least square MV' estimation method (WLSMV) was used (Muthèn & Muthèn, 2004).

Model fitting was conducted on half the dataset selected at random (N = 8000) and cross-validated on the other half (N = 8000). The fit measures for the partial samples scarcely differed. A one-factor model, a multi-factor model, and a second-order factor model were then tested per component and per social task. Comparison was in terms of the scaled chi-square difference ($\Delta\chi^2_{SB}$) (Satorra & Bentler, 1999) with the degrees of freedom equal to the number of fixed parameters and also of the attitude, skill, and reflection components in terms of the Bayesian Information Criterion (BIC) (Raftery, 1993) with a small BIC value indicating a better fit. (The knowledge models do not have a BIC value because of the dichotomous nature of the items).

For the fitting of the models, it was assumed that the items should load highly on the intended factor. For a good fit according to Bollen and Long (1993), the following rules of thumb were applied: RMSEA < .05 (root mean square error of approximation), CFI > .95 (comparative fit index), and TLI > .95 (Tucker Lewis index). They are less sensitive to sample size than a Chi-square test (with a p > .05). For the knowledge models, the WRMR < 1.00 (weighted root mean square residual) was used to identify those with a good fit. For the attitude, skill, and reflection models, the SRMR (standardised root mean square residual) with <.05 was used to identify those with a good fit. Then, the correlations were again calculated between the factors at a structural level and corrected for attenuation.

Results

Factor Models for the Knowledge, Attitude, Skill, and Reflection Components

Three models were compared for each of the four components. Factor loadings for the final models are presented in Table V and will be elucidated below (for item formulations see http://home.medeweker.uva.nl/g.t.m.tendam/page3.html).

For the *knowledge* component, the single factor model provided a far worse fit than the four-factor model in which the first-order factors for knowledge (i.e. the four social tasks) were allowed to correlate. The second-order model for the tasks within the knowledge component fit somewhat less well than the correlated model. It was decided to adopt the second-order model, as it is more parsimonious and still represents the knowledge component. The fit measures for this model using dataset 1 (i.e. the first — randomly selected — half of the COOL dataset) were found to be reasonable to good: $\chi^2(252) = 4204.980$ (p < .00), RMSEA = .045, WRMR = 3.31, SRMS = .061, CFI = .85, and TLI = .94. The cross-validation with dataset 2 produced no appreciable differences in the fit measures. Table V presents both the P-values and the factor loadings for the knowledge component according to the four social tasks. The knowledge items loaded relatively high on the knowledge subfactors per social task. The loadings of the four knowledge subfactors on the main knowledge factor did not differ very greatly.

The *attitude* items concerned with acting democratically were relevant for 'attitude acting democratically: 1 — desire to hear what everyone has to say' and 'attitude acting democratically; 2 — desire to make a critical contribution'. Five attitude factors were therefore included in the analyses. Three models were again compared for the attitude component. The single factor model provided a

TABLE V. P values[1] and loadings of the items[2] and loadings of the subfactors on the main factors in the clustered second-order models for the four components (Knowledge, Attitudes, Skills, and Reflection) using the COOL dataset 1 (N = 8000, 916 classes)[2]

	Knowledge		Attitudes		Skills		Reflection	
	Items	Pvalues/Loading[3]	Items	Loading[3]	Items	Loading[3]	Items	Loading[3]
Acting Democratically	K-ad-a	.89/.52	A-ad1-a	.67	S-ad1-a	.70	R-ad-a	.60
	K-ad-b	.79/.59	A-ad1-b	.70	S-ad1-b	.62	R-ad-b	.60
	K-ad-c	.73/.44	A-ad1-c	.62	S-ad1-c	.71	R-ad-c	.65
	K-ad-d	.72/.61					R-ad-d	.65
	K-ad-e	.67/.56	A-ad2-a	.64	S-ad2-a	.59	R-ad-e	.61
	K-ad-f	.86/.73	A-ad2-b	.56	S-ad2-b	.68	R-ad-f	.68
	K-ad-g	.88/.73	A-ad2-c	.68	S-ad2-c	.65		
	K-ad-h	.84/.73						
Acting in a socially responsible Manner	K-asr-a	.81/.53	A-asr-a	.55			R-asr-a	.66
	K-asr-b	.88/.62	A-asr-b	.41			R-asr-b	.59
	K-asr-c	.60/.36	A-asr-c	.60			R-asr-c	.73
	K-asr-d	.85/.72	A-asr-d	.61			R-asr-d	.70
	K-asr-e	.82/.67	A-asr-e	.48			R-asr-e	.73
	K-ast-f	.81/.56	A-asr-f	.49	S-asr/dc-a	.71	R-asr-f	.70
Dealing with Conflicts	K-dc-a	.84/.68	A-dc-a	.66	S-asr/dc-b	.63	R-dc-a	.71
	K-dc-b	.59/.48	A-dc-b	.63	S-asr/dc-c	.50	R-dc-b	.75
	K-dc-c	.75/.62	A-dc-c	.66	S-asr/dc-d	.71	R-dc-c	.75
	K-dc-d	.73/.51	A-dc-d	.60	S-asr/dc-e	.60	R-dc-d	.67
	K-dc-e	.73/.47	A-dc-e	.68			R-dc-e	.64
	K-dc-f	.71/.66	A-dc-f	.53			R-dc-f	.76
	K-dc-g	.66/.60					R-dc-g	.72
							R-dc-h	.75

TABLE V. Continued.

	Knowledge		Attitudes		Skills		Reflection	
	Items	Pvalues/Loading[3]	Items	Loading[3]	Items	Loading[3]	Items	Loading[3]
Dealing with Differences	K-dd-a	.59/.51	A-dd-a	.70	S-dd-a	.55	R-dd-a	.55
	K-dd-b	.81/.72	A-dd-b	.79	S-dd-b	.55	R-dd-b	.51
	K-dd-c	.87/.85	A-dd-c	.76	S-dd-c	.53	R-dd-c	.65
	K-dd-d	.86/.68	A-dd-d	.66	S-dd-d	.67	R-dd-d	.70
	K-dd-e	.66/.57	a-dd-e	.72			R-dd-e	.73
	K-dd-f	.81/.60	A-dd-f	.59			R-dd-f	.67
							R-dd-g	.74
							R-dd-h	.64
Main factor	K-ad	.90	A-ad1	.78	S-ad1	.45	R-ad	.84
	K-asr	.88	A-ad2	.81	S-ad2	.92	R-asr	.95
	K-dc	.91	A-asr	.96	S-asr/dc	.90	R-dc	.76
	K-dd	.81	A-dc	.76	S-dd	.88	R-dd	.85
			A-dd	.73				

1 P values = number of correct answers.
2 See Table 5 for item formulations.
3 The factor loadings for dataset 2 (N = 8000) did not deviate more than .05 from those for dataset 1.
4 The standard errors for the items were between: .025 and .064 (K), .016 and .047 (A), .020 and .086 (S), .017 and .031 (R).

considerably poorer fit than the five-factor model in which the first-order factors for attitude are correlated. The second-order model for the component attitude provided a slightly worse fit than the correlated model; the difference is small. For reasons of parsimony and interpretability, the second-order model was adopted. The fit measures for this model using dataset 1 were good: $\chi^2(247) = 3242.575$ ($p < .00$), RMSEA = .041, SRMS = .035, CFI = .93, and TLI = .92. The cross-validation with dataset 2 produced no appreciable differences in the fit measures. As can be seen in Table V, the attitude items loaded relatively high on the attitude subfactors per social task. The loadings of the five attitude subfactors on the main attitude factor differed somewhat more than in the analyses of the knowledge factor. The subfactor 'attitude — acting in a socially responsible manner' loaded particularly high on the main attitude factor (.96).

For the *skill* component, the items concerning acting democratically proved relevant for the ability to assert one's opinion and to listen to the opinions of others. Two subfactors were therefore distinguished. In contrast, the items that pertained to acting in a socially responsible manner and dealing with conflicts seemed to refer to a single underlying factor and were therefore combined. The four factors for the skill component do not, thus, correspond to the four social tasks distinguished on theoretical grounds.

In the comparison of the three models, the single factor model provided a considerably poorer fit than the four-factor model with correlation between the five first-order attitude factors. The fit of the second-order factor model was virtually the same as that of the correlated model. For reasons of parsimony and interpretability, the second-order factors model was adopted. The fit measures for this model using dataset 1 were good: $\chi^2(86) = 1370.209$ ($p < .00$), RMSEA = .045, SRMS = .035, CFI = .94, and TLI = .93. The cross-validation with dataset 2 produced no appreciable differences in the fit measures. As can be seen in Table V, the skill items loaded relatively high on the skill subfactors per social task. It can also be seen that the subfactor 'skill — acting democratically 1: Is able to assert own opinion' loads relatively lower (.45) than the other three (.88–.92) on the main skill factor.

For the *reflection* component, three models were again compared. For reasons of parsimony and interpretability, the second-order factor model was adopted. The fit measures for this model using dataset 1 ($\chi^2(346) = 4782.413$ ($p < .00$), RMSEA = .042, SRMS = .034, CFI = .93, and TLI = .93) were considerably better than those for the single factor model and virtually the same as those for the correlated four-factor model. The cross-validation with dataset 2 produced no appreciable differences in the fit measures. As can be seen in Table V, the reflection items loaded relatively high on the reflection subfactors per social task. The loadings of the subfactors on the main reflection factor varied from .76 to .95. Once again, one can speak of a subfactor that loaded extremely high on the main reflection factor, namely 'reflection — acting in a socially responsible manner' (.95).

Factor Models for the Four Social Tasks

For the social tasks of acting democratically (ad), acting in a socially responsible manner (asrm), dealing with conflicts (dc), and dealing with differences (dd), the single-factor model, the correlated factor model, and the second-order factor model were compared. Each social task encompassed attitude, skill, and reflection components but no knowledge component. This was decided for three reasons. First, the fit of the models that included the knowledge items fell to an unacceptable

level. Second, the loadings of the knowledge subfactor on the four main factors were very low (.15 for ad, .20 for asrm, .44 for dc, and .11 for dd). Third, the reliability analyses that included the knowledge items showed the Cronbach's α to decline for those scales intended to measure these social tasks.

In comparing the models, the single-factor model provided a considerably poorer fit than the three-factor model in which the first-order factors for acting democratically were allowed to correlate. The second-order model for the three components within the social task of acting democratically fitted somewhat less well than the correlated model. Nevertheless, the second-order model was adopted for substantive reasons: it was more parsimonious and represented the social task, as was intended. The fit measures for this model using dataset 1 were good: $\chi^2(130) = 2158.919(p < .00)$, RMSEA = .046, SRMS = .041, CFI = .93, and TLI = .92. Cross-validation with dataset 2 produced no appreciable differences in the fit measures.

In the model comparisons for the other three social tasks, the same was found as for the social task of acting democratically. The single-factor models fitted considerably less well than the correlated factor models, whilst the second-order model for the three components of citizenship competence per social task fitted equally well as the correlated model and was adopted for substantive reasons. The fit measures for the second-order model for acting in a socially responsible manner using dataset 1 were good: $\chi^2(116) = 2175.041(p < .00)$, RMSEA = .049, SRMS = .037, CFI = .93, and TLI = .92. The fit measures for the second-order model for dealing with differences were also good: $\chi^2(149) = 1682.360(p < .00)$, RMSEA = .037, SRMS = .028, CFI = .96, and TLI = .96. The same held for dealing with differences: $\chi^2(132) = 2321.042(p < .00)$, RMSEA = .047, SRMS = .032, CFI = .94, and TLI = .93. Cross-validation of the second-order models using dataset 2 produced no appreciable differences in the fit measures. In Table VI, the factor loadings are reported for the four social tasks with the attitude, skill, and reflection components distinguished per task. (For the formulation of the relevant items, see http://home.medewerker.uva.nl/g.t.m.tendam/page3.html). It shows that the items per social task loaded relatively high on the attitude, skill, and reflection components and that the attitude subfactors loaded highest on the main factor for each of the social tasks. For acting democratically, this was .76 and .82; for the other three, the attitude component loaded .91, .90, and .91, respectively. The loadings of the skill subfactors (.54–.88) and, in particular, the reflection subfactors (.56–.66) were lower.

Scale Construction for Components and Social Tasks

Scales were constructed per component on the basis of the second-order factor models that were fit for the knowledge, attitude, skill, and reflection components. On the basis of the second-order factor models that were fit for the four social tasks, scales were constructed per social task (without a knowledge component). Table VII shows the number of items, the reliability coefficients, and the statistics for these four components and four task scales.

Correlations between the Four Components and the Four Tasks

We analysed whether a factor model with citizenship competences as a third-order factor could explain the correlations between the second-order factors for the components or the social tasks. The correlations between the four second order

TABLE VI. Loadings of the items[1] and the subfactors on the main factors in the clustered second-order models for the four social tasks using the COOL dataset 1 (N = 8000, 916 classes)[2]

	Acting Democratically		Acting in a socially responsible manner[3]		Dealing with conflicts[3]		Dealing with differences	
	Items	Loading[4]	Items	Loading[4]	Items	Loading[4]	Items	Loading[4]
Attitudes	a-AD1-a	.66	a-ASR-a	.52	a-DC-a	.66	a-DD-a	.70
	a-AD1-b	.70	a-ASR-b	.42	a-DC-b	.63	a-DD-b	.79
	a-AD1-c	.65	a-ASR-c	.59	a-DC-c	.65	a-DD-c	.76
			a-ASR-d	.63	a-DC-d	.60	a-DD-d	.66
	a-AD2-a	.69	a-ASR-e	.48	a-DC-e	.69	a-DD-e	.73
	a-AD2-b	.60	a-ASR-f	.50	a-DC-f	.53	a-DD-f	.59
	a-AD2-c	.61						
Skills[3]	s-AD1-a	.70	s-ASR-a	.70	s-ASR-a	.68	s-DD-a	.57
	s-AD1-b	.62	s-ASR-b	.62	s-ASR-b	.59	s-DD-b	.59
	s-AD1-c	.70	s-DC-c	.51	s-DC-c	.53	s-DD-c	.57
			s-DC-d	.73	s-DC-d	.73	s-DD-d	.61
	s-AD2-a	.60	s-DC-e	.60	s-DC-e	.63		
	s-AD2-b	.75						
	s-AD2-c	.59						
Reflection	r-AD-a	.58	r-ASR/a	.63	r-DC-a	.71	r-DD-a	.54
	r-AD-b	.61	r-ASR-b	.57	r-DC-b	.75	r-DD-b	.52
	r-AD-c	.69	r-ASR-c	.75	r-DC-c	.76	r-DD-c	.66
	r-AD-d	.68	r-ASR-d	.70	r-DC-d	.65	r-DD-d	.68
	r-AD-e	.59	r-ASR-e	.74	r-DC-e	.62	r-DD-e	.74
	r-AD-f	.64	r-ASR-f	.69	r-DC-f	.75	r-DD-f	.67
					r-DC-g	.71	r-DD-g	.73
					r-DC-h	.75	r-DD-h	.64
Main factor	a-AD1	.76	a-ASR	.91	a-dc	.90	a-DD	.91
	a-AD2	.82						
	s-AD1	.54	s-ASR	.78	s-dc	.88	s-DD	.61
	s-AD2	.72						
	r-AD	.61	r-ASR	.64	r-dc	.66	r-DD	.56

1 See Table V for item formulations.
2 The factor loadings for dataset 2 (N = 8000) did not deviate more than.03 from those for dataset 1.
3 The subscale "skill — acting in a socially responsible manner and dealing with conflict" was included in both these social task scales
4 The standard errors for the items were between: .020–.054 (ad), .019–.037 (asr), .018–.026 (dc), .016–.036 (dd).

TABLE VII. Reliability coefficients (Cronbach's α), number of items (N), mean scale scores (M),[1] and standard deviations (SD) for the component scales and the social tasks scales (the latter without knowledge) across the entire COOL dataset (N = 16000)

	Cronbach's α	N	M	SD
Component scales[1]				
Knowledge	.83	27	.77	.18
Attitudes	.90	24	2.96	.43
Skills	.85	15	3.04	.39
Reflection	.94	28	2.27	.56
Social task scales (without knowledge)				
Acting democratically	.84	18	2.83	.41
Acting in a socially responsible manner[1]	.86	17	2.75	.45
Dealing with conflicts[2]	.90	19	2.73	.49
Dealing with differences	.87	18	2.54	.48

1 The knowledge scale varied between 0 and 1; the attitude, skill, and reflection scales varied between 1 and 4.
2 The subscale "skill — acting in a socially responsible manner and dealing with conflict" was included in both these social task scales

factors concerning the components as well as those between the four second-order factors concerning the social tasks were extremely high (so both matrices were not definite). There were also relatively high correlations between the subfactors for the different components and the different social tasks (Table III). This is why we limited ourselves to the calculation of the relations between the four components and the tasks. These are presented in Table VIII. The four components show very high and positive correlations. The attitude and skill components correlate very strongly. The association of the knowledge component with the other components, in contrast, is much lower. The correlation between knowledge and reflection is particularly weak. With regard to the correlations between the four social tasks it

TABLE VIII. Correlations between the knowledge, attitude, skill, and reflection components and the four social tasks for COOL dataset 1 (N = 8000)[1]

	Knowledge	Attitudes	Skills
Attitudes	.32		
Skills	.27	.88	
Reflection	.08	.70	.59

	Acting democratically	Acting in a socially responsible manner	Dealing with conflicts
Acting in a socially responsible manner	1.00		
Dealing with conflicts	.96	1.00	
Dealing with differences	1.00	1.00	.95

1 The correlations for dataset 2 (N = 8000) differed by no more than .04 from the correlations for dataset 1.

should be noted that the knowledge items were not included in the second-order factors per social task. The results show that the four social tasks have very strong interrelations.

Conclusions and Discussion

This article reported on research undertaken to measure the citizenship competences of students aged between 11 and 16. The instrument aimed to gain insight into their capacities to act in a democratic and pluriform society. The results provide empirical support for its construct validity. For each of the components and tasks, second-order factors models seemed to provide a good fit. The correlations between the components — with the exception of the knowledge component — were very strong, which also held for the social tasks. Eight reliable scales were constructed to measure young people's citizenship competences in terms of components and social tasks.

In light of the relations between the four components of citizenship competence, young people who estimate their citizenship skills as relatively high also report more positive attitudes towards citizenship. The knowledge component shows the least association with the other components. The relation between knowledge and reflection is particularly weak. Young people with more citizenship knowledge do not report thinking more about topics related to citizenship.

The special position of knowledge in young people's citizenship competences stands out in the analyses of the construct validity of the social tasks. For every social task, strong interrelations are found for attitudes, skills, and reflection, but not for knowledge. Whilst knowledge is theoretically part of the concept of citizenship competences and therefore included as an essential component of the measurement instrument, it seems that citizenship knowledge differs from citizenship attitudes, skills, and reflection. It therefore constitutes an independent element in the concept of citizenship competences when viewed from the perspective of the social tasks. The marginal correlations between knowledge and the other components point to the same. The distinct position of knowledge must therefore be kept in mind for further analyses and use of the instrument. We hope to gain greater insight into this aspect of citizenship from research that is being conducted on the criterion validity of the measurement instrument of teachers' judgements of their citizenship behaviour using a questionnaire developed for this purpose. Hence, the question of whether and how the various components of citizenship competence differs in conjunction with the variable of citizenship behaviour can be addressed.

The four social tasks seemed to be strongly interrelated. This *suggests* that a single general concept may underlie acting democratically, acting in a socially responsible manner, dealing with conflicts, and dealing with differences. At the same time, however, one cannot speak of a single underlying 'container' concept, as the different items and subfactors at a substantive level reflect the different elements of citizenship they are intended to reflect. Related to this is the fact that the fit of the second-order models for each of the tasks and components was good, which is in contrast with the fit of the single-factor models. Should the latter provide a better fit, then *all* the items per component or task should show considerable similarity for the respondents. From the better fit of the second-order model, however, certain *groups of items* can be seen to show similarities. They largely reflect the structure proposed on theoretical grounds. Furthermore, the correlations between the components and the tasks are found to be so high because

the use of second-order factors controls for any measurement error at *two* levels. Both the subfactors (first-order factors) and main factors are purged of any residual factor effects.

In follow-up research on the confirmatory and discriminatory validity of the instrument, how citizenship competences — as measured here — relate to a number of other concepts can be determined. To what extent do citizenship competences relate to students' cognitive capacities? Does this differ for the knowledge component in relation to the other components? A similar type of question can be posed with regard to young people's citizenship competences in relation to personality characteristics.

In closing, it can be noted that the high reliability of the eight constructed scales makes it possible to measure students' citizenship competences at the individual, class, and school levels and trace their development over time. The instrument can also be used to gain insight into short and long term effects of citizenship education. Follow-up research on the development of citizenship competences is being conducted in cooperation with three groups of schools (a group of primary education schools, a group of schools for lower vocational education, and a group of general secondary education schools). The results are not only of scientific interest, but also of relevance for educational practice. Current legislation assumes that schools are sufficiently qualified to contribute to the development of citizenship competences and has therefore obliged them to establish policy in this domain. For schools, it is therefore of major importance that insight be acquired into the effectiveness of their efforts.

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REFERENCES

Alexander, J. C. (2006) *The Civil Sphere* (New York, Oxford University Press).

Battistoni, R. M. (1997) Service learning and democratic citizenship, *Theory into Practice*, 36, pp. 150–156.

Beane, J. A. (2002) Beyond self-interest: a democratic core curriculum, *Educational Leadership*, 59, pp. 25–28.

Biesta, G. (2007) Education and the democratic person: towards a political conception of democratic education, *Teachers College Record*, 109, pp. 740–769.

Bollen, K. J. & Long, J. S. (Eds) (1993) *Testing Structural Equation Models* (Newbury Park, CA, Sage).

Cogan, J. & Morris, P. (2001) The development of civics values: an overview, *International Journal of Educational Research*, 35, pp. 1–10.

Cleaver, E., Ireland, E., Kerr, D. & Lopes, J. (2005) *Citizenship Education Longitudinal Study: second cross-sectional survey 2004. Listening to Young People: citizenship education in England* (London, DfES).

Dewey, J. (1966) [1916] *Democracy and Education* (New York, The Free Press).

Eurydice (2005) *Citizenship education at school in Europe. Survey* (Brussels, European Commission).

Glass, R. D. (2000) Education and the ethics of democratic citizenship, *Studies in Philosophy and Education*, 19, pp. 275–296.

Grant, R. W. (1996) The ethics of talk: classroom conversation and democratic politics, *Teachers College Record*, 97, pp. 470–482.

Haste, H. (2004) Constructing the citizen, *Political Psychology*, 25, pp. 413–439.

Hicks, D. (2001) Re-examining the future: the challenge for citizenship education, *Educational Review*, 53, pp. 229–240.

Higgins-D'alessandro, A. (2008) The judgement-action gap: a modest proposal, in: F. Oser & W. Veugelers (Eds) *Getting Involved* (pp.105–118) (Rotterdam/Taipei, Sense Publishers).

Holmes, M. (2001) Education and citizenship in an age of pluralism, in: D. Ratisch & J. Viteritti (Eds) *Making Good Citizens* (pp.187–212) (New Haven & London, Yale University Press).

Ireland, E., Kerr, D., Lopes, J. & Nelson, J. With Cleaver, E. (2006) *Active Citizenship and Young People: opportunities, experiences and challenges in and beyond school* (London, DfE).

Kerr, D. (1999) Changing the political culture: the Advisory Group on Education for Citizenship and the teaching of democracy in school, *Oxford Review of Education*, 25, pp. 274–285.

Kerr, D., Lopes, J., Nelson, J., White, K., Cleaver, E. & Benton, T. (2007) *VISION versus PRAGMATISM: Citizenship in the Secondary School Curriculum in England* (London, DfES).

Lawy, R. & Biesta, G. (2006) Citizenship-as-practice: the educational implications of an inclusive and relational understanding of citizenship, *British Journal of Educational Studies*, 54, pp. 34–50.

Leenders, H. & Veugelers, W. (2006) Different perspectives on values and citizenship education, *Curriculum and Teaching*, 21, pp. 5–20.

Mellenbergh, G. J. (2005) Item bias detection: modern approaches, in: B. S. Everitt & D. C. Howell (Eds) *Encyclopedia of Statistics in Behavioral Science* (Chichester, UK, John Wiley & Sons).

Muthèn, L. K. & Muthèn, B. O. (2004) Mplus: *the comprehensive modeling program for applied researchers. User's guide* (3rd ed) (Los Angeles, Muthèn & Muthèn).

Naval, C., Print, M. & Veldhuis, R. (2002) Education for democratic citizenship in the new Europe: context and reform, *European Journal of Education*, 37, pp. 107–128.

Osborne, K. (2001) Public schooling and citizenship education in Canada, *Canadian Ethic Studies*, 32, pp. 8–37.

Oser, F. & Veugelers, W. (2008) Introduction, in: F. Oser & W. Veugelers (Eds) *Getting Involved* (pp.1–13) (Rotterdam/Taipei, Sense Publishers).

Power, F. C. & Power, A. R. (2008) Civic engagement, global citizenship and moral psychology, in: F. Oser & W. Veugelers (Eds) *Getting Involved* (pp. 89–101) (Rotterdam/Taipei, Sense Publishers).

Print, M. & Gray, M. (2000) Civics and Citizenship Education: an Australian perspective. www.abc.net.au/civics/democracy/ccanded.htm.

Print, M. & Coleman, D. (2003) Towards understanding of social capital and citizenship education, *Cambridge Journal of Education*, 33, pp. 123–149.

Raftery, A. E. (1993) Bayesian model selection in structural equation models, in: K. A. Bollen & J. S. Long (Eds) *Testing Stuctural Equation Models* (pp. 163–180) (Beverly Hills, CA, Sage).

Rychen, D. S. & Salganik, L. H. (2003) *Key Competencies for a Successful Life and Well-functioning Society* (Göttingen, Hogrefe & Huber Publishers).

Satorra, A. & Bentler, P. (1999) *A scaled difference chi-square test statistic for moment structure analysis. Technical report* (Los Angeles, CA, University of California Press). http://preprints.stat.ucla.edu/260/chisquare.pdf.

Schuitema, J. A., Ten Dam, G. & Veugelers, W. (2008) Teaching strategies for moral education: a review, *Journal of Curriculum Studies*, 40, pp. 69–89.

Ten Dam, G., Volman, M. & Wardekker, W. (2004) Making sense through participation: social differences in learning and identity development, in: J. Van Der Linden & P. Renshaw (Eds) *Dialogic Learning* (pp. 63–85) (Dordrecht, Kluwer).

Ten Dam, G. & Volman, M. (2004) Critical thinking as a citizenship competence: teaching strategies, *Learning & Instruction*, 14, pp. 359–379.

Ten Dam, G. & Volman, M. (2007) Educating for adulthood or for citizenship: social competence as an educational goal, *European Journal of Education*, 42, pp. 281–298.

Ten Dam, G., Geijsel, F., Reumerman, R. & Ledoux, G. (2010) Burgerschapscompetenties: de ontwikkeling van een meetinstrument [Citizenship competences: the development of a measurement instrument], *Pedagogische Studiën*, 87, pp. 313–333.

Torney-Purta, J. (2002) Patterns in the civic knowledge, engagement, and attitudes of European adolescents: the IEA Civic Education Study, *European Journal of Education*, 37, pp. 129–141.

Torney-Purta, J. (2004) Adolescents' political socialization in changing contexts: an international study in the spirit of Nevitt Sanford, *Political Psychology*, 25, pp. 465–478.

Torney-Purta, J., Lehman, R., Oswald, H. & Shulz, W. (2001) *Citizenship and education in twenty-eight countries: civic knowledge and engagement at age fourteen*. (Amsterdam, IEA).

Torney, T., Oppenheim, A. N. & Farnen, R. F. (1975) *Civic education in ten countries: an empirical study* (New York, John Wiley and Sons).

Wardekker, W. (2001) Schools and moral education. Conformism or autonomy? *Journal of Philosophy of Education*, 35, pp. 101–114.

Westheimer, J. & Kahne, J. (2004) What kind of citizen? The politics of educating for democracy, *American Educational Research Journal*, 41, pp. 237–269.

Westheimer, J. (2008) On the relationship between political and moral engagement. In F. Oser & W. Veugelers (Eds) *Getting Involved. Global Citizenship Development and Sources of Moral Values* (pp. 17–29) (Rotterdam/Taipei, Sense Publishers).