

7 Appendix

7.1 Appendix to Data Description

Appendix 1D – Overall descriptive statistics

	Overall		By community		Difference Flemish and French
			Flemish Community N = 13,244	French Community N = 7,989	
	Range	Mean (SD)			
Dependent Variables					
Mathematics Literacy	117.47 – 804.99	532.90 (98.07)	550.27 (95.36)	504.11 (95.71)	46.15***
Reading Literacy	83.22 – 775.14	519.73 (94.26)	531.72 (88.41)	499.85 (100.11)	31.87***
Science Literacy	67.28 – 806.08	519.81 (95.45)	534.30 (90.60)	495.77 (95.80)	38.53***
Student-Level Independent Variables (N = 21,233)					
Family Structure					
Two parents	0 – 1	0.84	0.87	0.79	0.08***
Single parent	0 – 1	0.16	0.13	0.21	-0.08***
Single mother	0 – 1	0.13	0.11	0.18	-0.07***
Single father	0 – 1	0.03	0.02	0.03	-0.01***
Gender					
Boy	0 – 1	0.51	0.50	0.51	-0.01
Girl	0 – 1	0.49	0.50	0.49	0.01
ESCS Index	-5.05 – 2.71	0.21 (0.92)	0.22 (0.91)	0.19 (0.94)	0.03**
Language					
Test	0 – 1	0.78	0.75	0.83	-0.08***
Other	0 – 1	0.15	0.18	0.11	0.07***
Missing	0 – 1	0.07	0.07	0.06	0.01***
Immigrant Status					
Native	0 – 1	0.86	0.91	0.79	0.12***
Second Generation	0 – 1	0.07	0.04	0.10	-0.06***
First Generation	0 – 1	0.06	0.04	0.09	-0.05***
Unknow	0 – 1	0.01	0.01	0.02	-0.01***
Sense of Belonging to School	-3.69 – 2.63	-0.18 (0.90)	-0.19 (0.86)	-0.18 (0.98)	0.01
School-level Independent Variables (N = 808)					
Share of Single-Parent Families	0 – 1	0.16 (0.10)	0.13 (0.09)	0.21 (0.10)	-0.08***
Average ESCS Index	-2.35 – 1.60	0.20 (0.51)	0.21 (0.49)	0.18 (0.55)	0.03***
Share of Immigrants	0 – 1	0.13 (0.17)	0.09 (0.14)	0.20 (0.20)	-0.11***
Urbanisation					
Village	0 – 1	0.03	0.01	0.05	-0.04***
Small Town	0 – 1	0.23	0.28	0.16	0.12***
Town	0 – 1	0.53	0.56	0.47	0.09***
City	0 – 1	0.13	0.13	0.13	0.00
Big City	0 – 1	0.08	0.02	0.18	-0.16***
School Autonomy	-2.87 – 1.60	0.00 (0.55)	0.19 (0.38)	-0.35 (0.63)	0.53***
Teacher Participation	-2.07 – 2.81	0.24 (0.84)	0.46 (0.77)	-0.13 (0.83)	0.59***
Teacher Shortage	-1.20 – 3.19	0.28 (0.97)	0.01 (0.94)	0.73 (0.82)	-0.72***
Student-Teacher Ratio	1.33 – 44.33	9.43 (2.97)	9.03 (2.95)	10.14 (2.87)	-1.11***
Quality of Educational Resources	-3.59 – 2.20	0.24 (0.98)	0.51 (0.87)	-0.21 (0.98)	0.72***
Other Variables					
Community					
Flemish	0 – 1	0.62	/	/	
French	0 – 1	0.38	/	/	
Year					
2003	0 – 1	0.32	0.33	0.31	
2009	0 – 1	0.34	0.33	0.36	
2012	0 – 1	0.34	0.34	0.33	

*p < 0.1, **p < 0.05, ***p < 0.01

Appendix 2D – Descriptive statistics for 2003

	Overall		By community		Difference Flemish and French
			Flemish Community N = 4,399	French Community N = 2,496	
	Range	Mean (SD)			
Dependent Variables					
Mathematics Literacy	180.51 – 804.98	543.49 (100.46)	562.83 (95.26)	509.42 (100.34)	53.41***
Reading Literacy	140.49 – 745.89	520.66 (95.16)	538.78 (86.67)	488.74 (100.91)	50.04***
Science Literacy	67.28 – 765.38	521.68 (95.36)	536.89 (89.33)	494.89 (99.66)	42.00***
Student-Level Independent Variables (N = 6,895)					
Family Structure					
Two parents	0 – 1	0.82	0.86	0.74	0.12***
Single parent	0 – 1	0.18	0.14	0.26	-0.12***
Single mother	0 – 1	0.15	0.11	0.21	-0.10***
Single father	0 – 1	0.03	0.02	0.03	-0.01***
Gender					
Boy	0 – 1	0.52	0.51	0.54	-0.03**
Girl	0 – 1	0.48	0.49	0.46	0.03**
ESCS Index	-4.13 – 2.27	0.19 (0.93)	0.22 (0.90)	0.14 (0.98)	0.08***
Language					
Test	0 – 1	0.87	0.89	0.83	0.06***
Other	0 – 1	0.04	0.03	0.06	-0.03***
Missing	0 – 1	0.09	0.08	0.11	-0.03***
Immigrant Status					
Native	0 – 1	0.88	0.93	0.81	0.12***
Second Generation	0 – 1	0.06	0.04	0.10	-0.06***
First Generation	0 – 1	0.05	0.03	0.08	-0.05***
Unknow	0 – 1	0.01	0.00	0.01	-0.01**
Sense of Belonging to School	-3.38 – 2.22	-0.28 (0.89)	-0.26 (0.86)	-0.31 (0.95)	0.05*
School-level Independent Variables (N = 265)					
Share of Single-Parent Families	0 – 1	0.18 (0.11)	0.14 (0.09)	0.26 (0.10)	-0.12***
Average ESCS Index	-1.52 – 1.31	0.18 (0.53)	0.20 (0.50)	0.14 (0.57)	0.06***
Share of Immigrants	0 – 1	0.11 (0.16)	0.07 (0.11)	0.18 (0.20)	-0.11***
Urbanisation					
Village	0 – 1	0.02	0.01	0.04	-0.03***
Small Town	0 – 1	0.23	0.24	0.21	0.03***
Town	0 – 1	0.52	0.57	0.44	0.13***
City	0 – 1	0.12	0.15	0.05	0.10***
Big City	0 – 1	0.09	0.01	0.22	-0.21***
School Autonomy	-2.75 – 0.97	-0.02 (0.55)	0.18 (0.40)	-0.38 (0.59)	0.56***
Teacher Participation	-1.61 – 2.33	0.21 (0.82)	0.39 (0.82)	-0.12 (0.72)	0.51***
Teacher Shortage	-1.20 – 3.19	0.16 (0.98)	-0.16 (0.92)	0.73 (0.82)	-0.88***
Student-Teacher Ratio	1.97 – 44.33	9.58 (3.15)	9.39 (3.21)	9.93 (3.02)	-0.54***
Quality of Educational Resources	-2.49 – 2.2	0.21 (0.97)	0.50 (0.88)	-0.31 (0.93)	0.81***
Other Variables					
Community					
Flemish	0 – 1	0.64	/	/	
French	0 – 1	0.36	/	/	

*p < 0.1, **p < 0.05, ***p < 0.01

Appendix 3D – Descriptive statistics for 2009

	Overall		By community		Difference Flemish and French
			Flemish Community N = 4,317	French Community N = 2,866	
	Range	Mean (SD)			
Dependent Variables					
Mathematics Literacy	117.47 – 777.78	528.60 (95.13)	548.10 (89.67)	499.24 (95.59)	48.86***
Reading Literacy	147.72 – 747.99	518.46 (93.26)	529.88 (85.38)	501.26 (101.63)	28.62***
Science Literacy	122.75 – 755.45	520.84 (93.42)	538.73 (85.95)	493.88 (97.68)	44.85***
Student-Level Independent Variables (N = 7,183)					
Family Structure					
Two parents	0 – 1	0.83	0.86	0.79	0.07***
Single parent	0 – 1	0.17	0.14	0.21	-0.07***
Single mother	0 – 1	0.12	0.10	0.15	-0.05***
Single father	0 – 1	0.02	0.01	0.02	-0.01***
Gender					
Boy	0 – 1	0.50	0.50	0.50	0.00
Girl	0 – 1	0.50	0.50	0.50	0.00
ESCS Index	-3.55 – 2.70	0.25 (0.91)	0.25 (0.90)	0.25 (0.94)	0.00
Language					
Test	0 – 1	0.74	0.68	0.82	-0.14***
Other	0 – 1	0.20	0.22	0.17	0.05***
Missing	0 – 1	0.06	0.10	0.01	0.09
Immigrant Status					
Native	0 – 1	0.85	0.91	0.77	0.14***
Second Generation	0 – 1	0.07	0.04	0.12	-0.08***
First Generation	0 – 1	0.06	0.04	0.09	-0.05***
Unknow	0 – 1	0.02	0.01	0.02	-0.01***
Sense of Belonging to School	/	/	/	/	
School-level Independent Variables (N = 267)					
Share of Single-Parent Families	0 – 1	0.17 (0.09)	0.15 (0.09)	0.21 (0.09)	-0.06***
Average ESCS Index	-1.60 – 1.60	0.24 (0.50)	0.25 (0.46)	0.24 (0.56)	0.01
Share of Immigrants	0 – 1	0.14 (0.18)	0.09 (0.15)	0.21 (0.20)	-0.12***
Urbanisation					
Village	0 – 1	0.03	0.02	0.05	-0.03***
Small Town	0 – 1	0.25	0.34	0.11	0.23***
Town	0 – 1	0.50	0.51	0.49	0.02**
City	0 – 1	0.12	0.11	0.14	-0.03***
Big City	0 – 1	0.10	0.02	0.21	-0.19***
School Autonomy	/	/	/	/	
Teacher Participation	-2.07 – 2.81	0.19 (0.87)	0.42 (0.75)	-0.16 (0.91)	0.58***
Teacher Shortage	-1.02 – 2.87	0.48 (0.94)	0.24 (0.96)	0.84 (0.78)	-0.60***
Student-Teacher Ratio	1.33 – 15.03	9.36 (2.74)	8.67 (2.54)	10.46 (2.68)	-1.79***
Quality of Educational Resources	-2.65 – 1.93	0.17 (1.00)	0.51 (0.90)	-0.33 (0.92)	0.84***
Other Variables					
Community					
Flemish	0 – 1	0.60	/	/	
French	0 – 1	0.40	/	/	

*p < 0.1, **p < 0.05, ***p < 0.01

Appendix 4D – Descriptive statistics for 2012

	Overall		By community		Difference Flemish and French
			Flemish Community N = 4,528	French Community N = 2,627	
	Range	Mean (SD)			
Dependent Variables					
Mathematics Literacy	184.15 – 802.55	527.02 (97.85)	540.13 (99.29)	504.40 (90.99)	35.73***
Reading Literacy	83.22 – 775.14	520.11 (94.38)	526.63 (92.43)	508.88 (96.66)	17.75***
Science Literacy	134.69 – 806.08	516.96 (94.55)	527.57 (95.64)	498.67 (89.77)	28.90***
Student-Level Independent Variables (N = 7,155)					
Family Structure					
Two parents	0 – 1	0.87	0.89	0.83	0.06***
Single parent	0 – 1	0.13	0.11	0.17	-0.06***
Single mother	0 – 1	0.11	0.09	0.14	-0.05***
Single father	0 – 1	0.02	0.02	0.02	0.00
Gender					
Boy	0 – 1	0.50	0.50	0.49	0.01
Girl	0 – 1	0.50	0.50	0.51	-0.01
ESCS Index	-5.05 – 2.71	0.19 (0.91)	0.19 (0.92)	0.17 (0.89)	0.02
Language					
Test	0 – 1	0.74	0.68	0.84	-0.16***
Other	0 – 1	0.20	0.28	0.08	0.20***
Missing	0 – 1	0.06	0.04	0.08	-0.04***
Immigrant Status					
Native	0 – 1	0.86	0.89	0.80	0.09***
Second Generation	0 – 1	0.07	0.06	0.10	-0.04***
First Generation	0 – 1	0.06	0.04	0.09	-0.05***
Unknow	0 – 1	0.01	0.01	0.01	0.00
Sense of Belonging to School	-3.69 – 2.63	-0.04 (0.91)	-0.07 (0.85)	-0.01 (1.01)	-0.06**
School-level Independent Variables (N = 276)					
Share of Single-Parent Families	0 – 1	0.13 (0.09)	0.11 (0.08)	0.17 (0.09)	-0.06***
Average ESCS Index	-2.35 – 1.20	0.18 (0.50)	0.18 (0.50)	0.17 (0.51)	-0.01
Share of Immigrants Urbanisation	0 – 1	0.14 (0.17)	0.10 (0.15)	0.20 (0.20)	-0.10***
Village	0 – 1	0.03	0.01	0.05	-0.04***
Small Town	0 – 1	0.22	0.25	0.16	0.09***
Town	0 – 1	0.54	0.59	0.46	0.13***
City	0 – 1	0.15	0.13	0.19	-0.06***
Big City	0 – 1	0.06	0.02	0.10	-0.08***
School Autonomy	-2.87 – 1.60	0.01 (0.56)	0.19 (0.37)	-0.31 (0.68)	0.50***
Teacher Participation	-1.85 – 2.00	0.33 (0.83)	0.57 (0.71)	-0.12 (0.84)	0.69***
Teacher Shortage	-1.09 – 2.45	0.19 (0.95)	-0.04 (0.93)	0.59 (0.85)	-0.63***
Student-Teacher Ratio	1.73 – 19.02	9.37 (3.01)	9.03 (3.02)	9.98 (2.89)	-0.95***
Quality of Educational Resources	-3.59 – 1.98	0.35 (0.95)	0.54 (0.84)	0.02 (1.06)	0.52***
Other Variables					
Community					
Flemish	0 – 1	0.63	/	/	
French	0 – 1	0.37	/	/	

*p < 0.1, **p < 0.05, ***p < 0.01

Appendix 5D – Mathematics, Reading and Science linear correlations

	Mathematics	Reading	Science
Mathematics	1.0000		
Reading	0.8784	1.0000	
Science	0.9223	0.9154	1.0000

Appendix 6D – Community and family structure linear correlation with Mathematics, Reading and Science

	Mathematics	Reading	Science
Flemish Community	0.2280	0.1638	0.1976
Single-parent family	-0.1351	-0.1207	-0.1243
School share of single-parent families	-0.3598	-0.3463	-0.3400

Appendix 7D – Family structure and independent variables linear correlations

Single-parent family		School share of single-parent families	
Girl	0.0056	School average ESCS index	-0.3525
ESCS index	-0.1182	School share of immigrants	0.2859
Language		Urbanisation	
Test	-0.0107	Village	0.0335
Other	-0.0177	Small town	-0.0776
Unknown	0.0361	Town	-0.0947
Immigrant status		City	0.0690
Native	-0.0374	Big city	0.1906
1st gen.	0.0026	Teacher shortage	0.1681
2nd gen.	0.0481	Student-teacher ratio	-0.2123
Unknown	0.0128	School quality of educational resources	-0.1808
Share of single-parent families	0.2720		

7.2 Appendix to Data Analysis

Appendix 1A – Flemish Community coefficients for the tests of hypotheses 1 and 1 bis

		Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Mathematics	Overall	44.23*** (1.873)	41.53*** (1.639)	36.60*** (1.630)	28.58*** (1.886)	28.60*** (1.885)	32.64*** (1.721)	32.71*** (1.774)
	2003	49.85*** (2.482)	47.01*** (2.147)	41.53*** (2.145)	33.84*** (2.547)	33.82*** (2.546)	38.98*** (2.334)	39.62*** (2.395)
	2012	35.82*** (2.834)	33.34*** (2.525)	29.25*** (2.502)	21.26*** (2.827)	21.58*** (2.824)	24.15*** (2.549)	23.61*** (2.643)
	Overall	34.80*** (1.828)	32.24*** (1.596)	27.57*** (1.588)	18.97*** (1.813)	19.01*** (1.807)	23.16*** (1.629)	23.71*** (1.688)
	2003	46.51*** (2.406)	43.77*** (2.055)	38.53*** (2.044)	29.86*** (2.370)	29.67*** (2.362)	34.86*** (2.145)	35.67*** (2.209)
	2012	17.27*** (2.775)	15.00*** (2.500)	11.27*** (2.494)	3.207 (2.819)	3.530 (2.810)	6.232** (2.492)	6.489** (2.601)
Reading	Overall	34.90*** (1.809)	32.26*** (1.567)	27.19*** (1.560)	18.82*** (1.804)	18.83*** (1.803)	22.56*** (1.653)	22.70*** (1.708)
	2003	38.45*** (2.415)	35.61*** (2.043)	30.22*** (2.045)	21.76*** (2.411)	21.72*** (2.410)	26.61*** (2.208)	28.24*** (2.262)
	2012	29.59*** (2.706)	27.26*** (2.430)	22.87*** (2.405)	14.87*** (2.737)	15.00*** (2.736)	17.27*** (2.504)	15.65*** (2.601)
	Overall	34.90*** (1.809)	32.26*** (1.567)	27.19*** (1.560)	18.82*** (1.804)	18.83*** (1.803)	22.56*** (1.653)	22.70*** (1.708)
	2003	38.45*** (2.415)	35.61*** (2.043)	30.22*** (2.045)	21.76*** (2.411)	21.72*** (2.410)	26.61*** (2.208)	28.24*** (2.262)
	2012	29.59*** (2.706)	27.26*** (2.430)	22.87*** (2.405)	14.87*** (2.737)	15.00*** (2.736)	17.27*** (2.504)	15.65*** (2.601)
Science	Overall	34.90*** (1.809)	32.26*** (1.567)	27.19*** (1.560)	18.82*** (1.804)	18.83*** (1.803)	22.56*** (1.653)	22.70*** (1.708)
	2003	38.45*** (2.415)	35.61*** (2.043)	30.22*** (2.045)	21.76*** (2.411)	21.72*** (2.410)	26.61*** (2.208)	28.24*** (2.262)
	2012	29.59*** (2.706)	27.26*** (2.430)	22.87*** (2.405)	14.87*** (2.737)	15.00*** (2.736)	17.27*** (2.504)	15.65*** (2.601)
	Overall	34.90*** (1.809)	32.26*** (1.567)	27.19*** (1.560)	18.82*** (1.804)	18.83*** (1.803)	22.56*** (1.653)	22.70*** (1.708)
	2003	38.45*** (2.415)	35.61*** (2.043)	30.22*** (2.045)	21.76*** (2.411)	21.72*** (2.410)	26.61*** (2.208)	28.24*** (2.262)
	2012	29.59*** (2.706)	27.26*** (2.430)	22.87*** (2.405)	14.87*** (2.737)	15.00*** (2.736)	17.27*** (2.504)	15.65*** (2.601)

Note: Model 1 is the raw Community gap and each of the following models adds those variables one by one: the student ESCS index, the immigrant status, the school autonomy (as the school autonomy and the teacher participation), the children sense of belonging to school, the school average ESCS and the school share of immigrants.

Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 2A – Single parent coefficients for the tests of hypotheses 2 and 2 bis

		Model 1	Model 3	Model 4	Model 5	Model 6
Mathematics	Overall	-37.14*** (1.840)	-21.59*** (1.682)	-20.86*** (1.644)	-20.82*** (1.634)	-20.71*** (1.631)
	2003	-45.17*** (3.176)	-30.86*** (2.790)	-29.83*** (2.735)	-29.47*** (2.717)	-29.40*** (2.720)
	2009	-31.30*** (3.051)	-16.13*** (2.853)	-16.24*** (2.797)	-16.45*** (2.775)	-16.23*** (2.751)
	2012	-34.32*** (3.328)	-16.93*** (3.101)	-15.36*** (3.014)	-15.55*** (3.003)	-15.48*** (3.002)
Reading	Overall	-31.14*** (1.837)	-16.28*** (1.693)	-15.48*** (1.655)	-15.52*** (1.639)	-15.72*** (1.608)
	2003	-40.63*** (3.181)	-26.75*** (2.786)	-25.42*** (2.715)	-25.03*** (2.686)	-25.25*** (2.617)
	2009	-24.94*** (3.030)	-10.42*** (2.889)	-10.43*** (2.832)	-10.63*** (2.806)	-10.87*** (2.775)
	2012	-26.97*** (3.323)	-10.65*** (3.116)	-9.221*** (3.044)	-9.694*** (3.023)	-9.844*** (2.958)
Science	Overall	-32.47*** (1.802)	-17.23*** (1.649)	-16.54*** (1.607)	-16.53*** (1.596)	-16.49*** (1.596)
	2003	-36.03*** (3.105)	-21.64*** (2.685)	-20.64*** (2.626)	-20.30*** (2.609)	-20.27*** (2.611)
	2009	-28.09*** (3.001)	-13.42*** (2.858)	-13.70*** (2.794)	-13.93*** (2.770)	-13.85*** (2.767)
	2012	-33.43*** (3.258)	-16.69*** (3.029)	-15.07*** (2.926)	-15.48*** (2.911)	-15.45*** (2.910)

Note: Model 1 is the raw individual family structure gap and each of the following models adds those variables one by one: the student ESCS index, the immigrant status, the language and the gender of the child.

Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 3A – School share of single parent coefficients for the tests of hypotheses 3 and 3 bis

		Model 1	Model 3	Model 4	Model 5
Mathematics	Overall	-369.3*** (6.584)	-173.1*** (5.892)	-159.0*** (6.169)	-140.0*** (6.323)
	2003	-331.1*** (10.63)	-165.8*** (9.300)	-147.1*** (9.897)	-132.8*** (10.36)
	2009	-375.6*** (11.66)	-181.9*** (10.17)	-160.8*** (10.76)	-135.9*** (11.01)
	2012	-418.4*** (11.81)	-170.5*** (11.51)	-164.8*** (11.82)	-149.1*** (11.99)
Reading	Overall	-333.3*** (6.614)	-4.442*** (1.489)	-4.654*** (1.522)	-4.674*** (1.515)
	2003	-314.0*** (10.65)	-147.5*** (9.010)	-129.1*** (9.832)	-115.9*** (10.41)
	2009	-319.9*** (11.71)	-116.4*** (10.20)	-105.7*** (10.56)	-90.89*** (10.95)
	2012	-375.8*** (11.93)	-116.0*** (11.37)	-102.3*** (11.45)	-89.51*** (11.71)
Science	Overall	-331.1*** (6.484)	-140.5*** (5.795)	-128.1*** (6.056)	-111.1*** (6.235)
	2003	-291.0*** (10.30)	-125.7*** (8.819)	-109.9*** (9.471)	-99.33*** (9.929)
	2009	-348.1*** (11.52)	-160.2*** (10.24)	-137.8*** (10.70)	-117.1*** (11.05)
	2012	-372.1*** (11.92)	-138.5*** (11.61)	-140.1*** (11.86)	-123.2*** (12.09)

Note: Model 1 is the raw concentration effect of single-parent families and each of the following models adds those variables one by one: the ESCS index (the individual and the school average), the quality of teaching time (as the quality of educational resources, the teacher shortage and the student-teacher ratio) and the urbanisation. Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 4A – Coefficients for the tests of hypotheses 5, 6, 7 and 8

		Model 1	Model 2	Model 3	Model 4
Mathematics	Overall	-0.740 (1.704)	23.26 (16.45)	-12.13*** (3.647)	-106.5*** (13.87)
	2003	6.732 (6.791)	34.18 (24.20)	-9.788 (6.312)	-125.7*** (25.04)
	2009	-2.667 (1.813)	34.41 (32.85)	-12.27** (6.028)	-54.44** (24.06)
	2012	11.17 (8.858)	-10.95 (30.02)	-19.39*** (6.603)	-152.0*** (24.09)
Reading	Overall	0.166 (1.712)	-9.128 (16.71)	-4.910 (3.694)	-40.86*** (14.22)
	2003	11.44 (7.751)	-12.26 (25.63)	-3.703 (6.335)	-80.04*** (26.10)
	2009	-2.489 (1.782)	30.19 (30.63)	-6.686 (6.108)	17.57 (24.46)
	2012	20.92** (9.071)	-39.50 (31.01)	-11.92* (6.724)	-111.3*** (24.83)
Science	Overall	-1.678 (1.664)	9.867 (15.91)	-6.057* (3.591)	-62.00*** (13.69)
	2003	7.249 (7.542)	2.469 (24.02)	-1.232 (6.207)	-74.86*** (24.65)
	2009	-2.983* (1.763)	32.42 (29.93)	-6.192 (5.946)	7.894 (23.81)
	2012	-2.949 (8.831)	-32.59 (30.73)	-14.94** (6.504)	-115.2*** (24.45)

Note: Model 1 is the test of Hypothesis 5 and shows the coefficients of Single Mother dummy, Model 2 tests for Hypothesis 6 and depicts the coefficients of the interaction of the single parent dummy with the concentration of single-parent families, Model 3 is the test of Hypothesis 7 and displays the coefficients of the interaction of the single parent dummy and the Flemish Community and Model 4 tests for Hypothesis 8 and shows the coefficients of the interaction of the concentration of single-parent families and the Flemish Community

Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 5A – Flemish Community coefficients for the test of hypotheses 9

		Model 3	Model 4	Model 5
Mathematics	Overall	32.71*** (1.774)	31.52*** (1.775)	24.43*** (1.900)
	2003	39.62*** (2.395)	37.61*** (2.400)	29.59*** (2.663)
	2012	23.61*** (2.643)	23.33*** (2.645)	18.80*** (2.717)
Reading	Overall	23.71*** (1.688)	22.86*** (1.690)	16.65*** (1.823)
	2003	35.67*** (2.209)	34.11*** (2.212)	27.54*** (2.474)
	2012	6.489** (2.601)	6.412** (2.605)	2.938 (2.681)
Science	Overall	22.70*** (1.708)	21.88*** (1.710)	16.51*** (1.836)
	2003	28.24*** (2.262)	27.03*** (2.269)	20.93*** (2.522)
	2012	15.65*** (2.601)	15.36*** (2.602)	11.94*** (2.680)

Note: all Models control for the following variables: the student ESCS index, the immigrant status, the language and the gender of the child. Model 2 adds the single parent dummy, this is the individual variable, and Model 3 adds the school share of single-parent families, this is the concentration variable.

Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 6A – Test of the sole effect of the school share of immigrant on the Community gap

	Overall		2003		2012	
	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.
Mathematics	43.71*** (1.819)	24.55*** (1.835)	48.50*** (2.361)	27.50*** (2.373)	35.82*** (2.834)	19.15*** (2.886)
R-squared	0.049	0.129	0.055	0.137	0.033	0.112
Reading	34.50*** (1.778)	16.09*** (1.783)	44.94*** (2.297)	24.35*** (2.272)	17.27*** (2.775)	1.854 (2.856)
R-squared	0.033	0.116	0.053	0.141	0.009	0.085
Science	34.26*** (1.760)	15.65*** (1.781)	37.09*** (2.302)	17.24*** (2.314)	29.59*** (2.706)	12.71*** (2.772)
R-squared	0.032	0.116	0.036	0.117	0.025	0.115
Observations	11,921	11,921	7,382	7,382	4,539	4,539

Note: the variables used are the dummy for the Flemish Community, the dummy to control for the year (with the overall data) and the school share of immigrants for the mitigation.

Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 7A – Test of the sole effect of the immigrant status on the individual Family structure gap

	Overall		2003		2009		2012	
	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.
Mathematics	-35.95*** (1.834)	-32.85*** (1.785)	-41.74*** (3.149)	-38.04*** (3.055)	-34.32*** (3.328)	-29.82*** (3.238)	-34.32*** (3.328)	-29.82*** (3.238)
R-squared	0.022	0.102	0.024	0.110	0.014	0.099	0.014	0.099
Reading	-30.04*** (1.832)	-27.07*** (1.782)	-37.42*** (3.161)	-33.58*** (3.046)	-24.94*** (3.030)	-23.43*** (2.962)	-26.97*** (3.323)	-22.92*** (3.247)
R-squared	0.013	0.089	0.021	0.111	0.010	0.076	0.009	0.084
Science	-31.26*** (1.797)	-28.20*** (1.743)	-32.62*** (3.082)	-29.01*** (2.982)	-33.43*** (3.258)	-28.91*** (3.147)	-33.43*** (3.258)	-28.91*** (3.147)
R-squared	0.015	0.100	0.016	0.105	0.014	0.106	0.014	0.106
Observations	21,886	21,886	7,548	7,548	7,155	7,155	7,155	7,155

Note: the variables used are the dummy for the family structure, the dummy to control for the year (with the overall data) and the immigrant status dummies for the mitigation.
Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 8A – Test of the sole effect of the language on the individual Family structure gap

	Overall		2003		2009		2012	
	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.
Mathematics	-35.95*** (1.834)	-34.87*** (1.797)	-41.74*** (3.149)	-39.41*** (3.069)	-34.32*** (3.328)	-33.89*** (3.275)	-34.32*** (3.328)	-33.89*** (3.275)
R-squared	0.022	0.067	0.024	0.095	0.014	0.056	0.014	0.056
Reading	-30.04*** (1.832)	-28.92*** (1.786)	-37.42*** (3.161)	-35.08*** (3.060)	-24.94*** (3.030)	-24.17*** (2.963)	-26.97*** (3.323)	-26.53*** (3.255)
R-squared	0.013	0.067	0.021	0.100	0.010	0.049	0.009	0.062
Science	-31.26*** (1.797)	-30.17*** (1.759)	-32.62*** (3.082)	-30.33*** (2.999)	-33.43*** (3.258)	-33.07*** (3.195)	-33.43*** (3.258)	-33.07*** (3.195)
R-squared	0.015	0.065	0.016	0.091	0.014	0.064	0.014	0.064
Observations	21,886	21,886	7,548	7,548	7,155	7,155	7,155	7,155

Note: the variables used are the dummy for the family structure, the dummy to control for the year (with the overall data) and the language dummies for the mitigation.
Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01

Appendix 9A – Test of the sole effect of the quality of teaching time on the concentration of single-parent families' gap

	Overall		2003		2009		2012	
	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.	Raw	Mitig.
Mathematics	-372.7*** (6.748)	-279.9*** (7.372)	-336.2*** (11.29)	-254.3*** (13.73)	-375.6*** (11.66)	-295.6*** (11.73)	-418.4*** (11.81)	-295.0*** (12.50)
R-squared	0.142	0.267	0.129	0.258	0.144	0.280	0.146	0.263
Reading	-335.6*** (6.759)	-236.0*** (7.533)	-318.7*** (11.26)	-236.3*** (14.12)	-319.9*** (11.71)	-236.5*** (11.53)	-375.8*** (11.93)	-230.0*** (12.17)
R-squared	0.118	0.274	0.125	0.270	0.107	0.278	0.124	0.281
Science	-333.9*** (6.652)	-245.6*** (7.244)	-293.7*** (10.95)	-214.2*** (13.44)	-348.1*** (11.52)	-270.5*** (11.64)	-372.1*** (11.92)	-262.6*** (12.61)
R-squared	0.118	0.242	0.104	0.242	0.127	0.256	0.126	0.237
Observations	21,886	20,498	7,548	7,057	7,183	6,846	7,155	6,595

Note: the variables used are the dummy for the family structure, the school share of single-parent families, the dummy to control for the year (with the overall data) and the school quality of educational resources, the school teacher shortage and the school student-teacher ratio for the mitigation.
Robust standard errors in parentheses, *p < 0.1, **p < 0.05, ***p < 0.01