

Supplementary online material

Nennstiel, Richard (2021): Do more demanding lower secondary school certificates for minority students pay off? A comparison of VET access between Germany and German-speaking Switzerland. *Soziale Welt* 72(3), 313-342

Table S1: Descriptive statistics (mean (M) and standard deviation (SD)) of selected variables by country, migration background and VET aspiration

	Germany							
	Native				Minority student			
	want VET		don't want VET		want VET		don't want VET	
	M	SD	M	SD	M	SD	M	SD
Secondary school certificate								
Basic req.	0.14	0.35	0.28	0.45	0.48	0.50	0.59	0.49
Extended req.	0.86	0.35	0.72	0.45	0.52	0.50	0.41	0.49
Grade German (std.)	0.09	0.84	-0.01	0.86	0.07	0.91	0.01	0.90
Grade mathematics (std.)	0.22	0.79	-0.21	0.93	-0.21	0.99	-0.03	0.77
Social origin (HISEI)	47.89	17.58	47.47	16.70	39.40	17.85	32.87	14.53
Occupational aspirations								
don't know	0.05	0.23	0.13	0.34	0.08	0.27	0.08	0.27
ISEI: 16-41	0.58	0.49	0.38	0.49	0.41	0.49	0.35	0.48
ISEI: 42-67	0.33	0.47	0.31	0.47	0.33	0.47	0.49	0.50
ISEI: 68-90	0.03	0.18	0.17	0.38	0.18	0.38	0.08	0.28
Women	0.34	0.48	0.45	0.50	0.50	0.50	0.37	0.49
Competences: reading (std.)	0.28	0.84	0.25	0.87	-0.26	0.95	-0.50	0.70
Competences: cognitive (std.)	-0.03	0.92	-0.17	0.92	-0.38	1.04	-0.22	0.97
	Switzerland							
	Native				Minority student			
	want VET		don't want VET		want VET		don't want VET	
	M	SD	M	SD	M	SD	M	SD
Secondary school certificate								
Basic req.	0.32	0.47	0.39	0.49	0.47	0.50	0.55	0.50
Extended req.	0.68	0.47	0.61	0.49	0.53	0.50	0.45	0.50
Grade German (std.)	0.15	0.69	0.07	0.81	-0.24	1.10	-0.29	1.14
Grade mathematics (std.)	0.11	0.91	-0.00	0.91	-0.21	1.10	-0.28	1.07
Social origin (HISEI)	53.44	19.50	53.89	19.83	46.37	20.92	48.12	21.33
Occupational aspirations								
don't know	0.07	0.26	0.13	0.33	0.14	0.34	0.12	0.33
ISEI: 16-41	0.42	0.49	0.32	0.47	0.30	0.46	0.21	0.41
ISEI: 42-67	0.34	0.47	0.42	0.50	0.40	0.49	0.43	0.50
ISEI: 68-90	0.16	0.37	0.13	0.34	0.16	0.37	0.24	0.43
Women	0.42	0.49	0.59	0.49	0.42	0.49	0.61	0.49
Youth unemp. rate	2.46	0.83	2.58	0.82	2.92	0.87	2.93	0.85

Source: DAB panel study (version 3.0.0); CILS4EU (reduced version 3.3.0); weighted data; author's calculations.

Table S2: Missing value patterns (in %) of the model variables in the analytical sample by country and migrant background

	Germany		Switzerland	
	Native	Minority student	Native	Minority student
Grade German	1.03	1.40	3.87	3.68
Grade mathematics	0	0	3.87	3.68
Social origin (HISEI)	0.77	4.19	3.04	7.65
Occupational aspirations (ISEI)	0	0.47	0	0
Competences: cognitive	0.26	0	x	x
Competences: reading	0.26	0	x	x
Youth unemp. rate	x	x	0.55	0
At least one missing value	2.05	6.05	7.32	11.05

Note: All model variables not depicted have no missing values. x = variable is not available in the data set.

Source: DAB panel study version 3.0.0 and CILS4EU (reduced version 3.3.0); author's calculations.

Table S3: Multilevel linear probability models predicting VET success in German-speaking Switzerland and Germany (complete case analysis)

	Germany			Switzerland			Switzerland: subsample		
	M1	M2	M3	M1	M2	M3	M1	M2	M3
Migration background (ref.: native)									
Minority student	-0.110***	-0.002	0.117+	-0.092***	-0.067***	-0.080*	-0.107***	-0.081***	-0.071+
Secondary school certificate (ref.: basic req.)									
Extended req.		0.126***	0.209***		0.097***	0.089***		0.074*	0.080*
Grade: German (std.)		0.039+	0.038+		0.005	0.005		-0.017	-0.016
Grade: mathematics (std.)		0.104***	0.102***		0.056***	0.057***		0.057***	0.057***
Competences: read (std.)		0.019	0.018					0.050*	0.050*
Competences: cognitive/math (std.)		0.004	0.006					-0.015	-0.015
Social origin (HISEI)		0.002*	0.002*		-0.001*	-0.001*		-0.002***	-0.002***
Occupational aspirations (ref.: don't know)									
ISEI: 16-41		0.109	0.111		0.095*	0.095*		0.097*	0.097*
ISEI: 42-67		-0.023	-0.017		0.043	0.043		0.027	0.027
ISEI: 68-90		-0.047	-0.050		0.109***	0.109***		0.094+	0.094+
Gender (ref.: men)									
Women		-0.042	-0.048		-0.086***	-0.085***		-0.094***	-0.094***
Extended req. x minority students			-0.200*			0.021			-0.016
Youth unemp. rate (log)					0.024	0.023		0.052	0.052
Intercept	0.712***	0.484***	0.426***	0.910***	0.849***	0.854***	0.916***	0.899***	0.895***
SD(school)	0.15***	0.11***	0.10***	0.07***	0.04***	0.04***	0.05***	0.02	0.02
σ	0.43***	0.42***	0.41***	0.31***	0.30***	0.30***	0.31***	0.30***	0.30***
ICC	0.11	0.06	0.06	0.04	0.02	0.02	0.03	0.01	0.01
<i>N</i>	584	584	584	985	985	985	629	629	629

Note: + $p < 0.1$, * $p < 0.05$, *** $p < 0.01$. ref = reference category. ICC = intraclass correlation coefficient.

Source: DAB panel study (version 3.0.0); CILS4EU (reduced version 3.3.0); author's calculations.

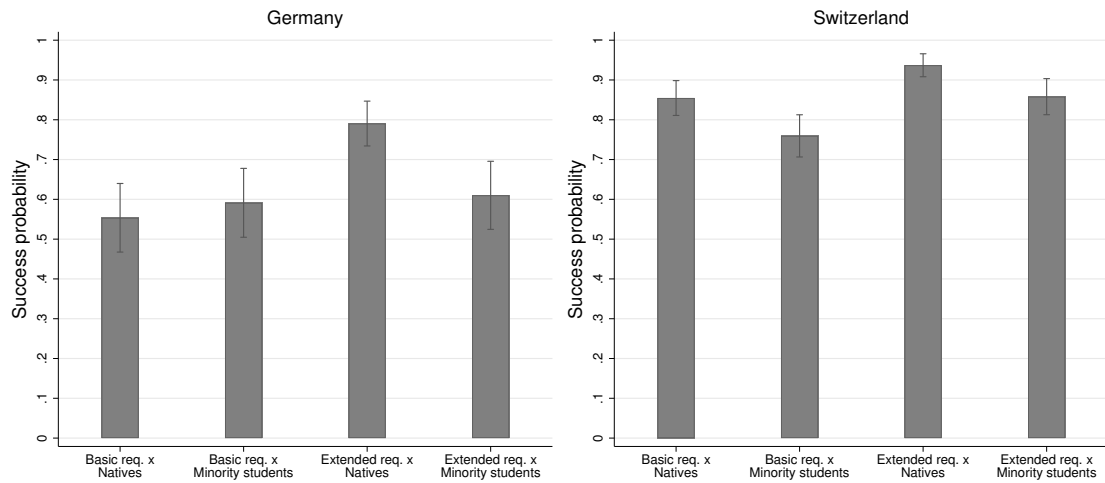


Figure S1: VET success probability with 95% CI separated by country, secondary school certificate and migration background (complete case analysis)

Notes: Predicted based on the fixed parts of the M3 models in Table S3. *Source:* DAB panel study (version 3.0.0); CILS4EU (reduced version 3.3.0); weighted data; author's calculations.

Table S4: Multilevel linear probability models predicting VET success in German-speaking Switzerland and Germany

	Germany			Switzerland			Switzerland: subsample		
	M1	M2	M3	M1	M2	M3	M1	M2	M3
Migration background (ref.: native)									
Minority student	-0.065	0.025	0.123 ⁺	-0.060 ^{***}	-0.042 ⁺	-0.098 [*]	-0.095 ^{***}	-0.073 ^{***}	-0.104 [*]
Secondary school certificate (ref.: basic req.)									
Extended req.		0.031	0.105 ⁺		0.184 [*]	0.149		0.142	0.121
Grade: German (std.)		0.053 [*]	0.056 [*]		0.016	0.016		0.002	0.003
Grade: mathematics (std.)		0.095 ^{***}	0.093 ^{***}		0.052 ^{***}	0.052 ^{***}		0.062 ^{***}	0.061 ^{***}
Competences: read (std.)		0.012	0.011					0.035 ⁺	0.034 ⁺
Competences: cognitive/mathematics (std.)		0.004	0.006					-0.047 [*]	-0.046 [*]
Social origin (HISEI)		0.001	0.001		-0.001 ^{***}	-0.001 ^{***}		-0.002 ^{***}	-0.002 ^{***}
Occupational aspirations (ref.: don't know)									
ISEI: 16-41		0.116 ⁺	0.118 ⁺		0.092 ^{***}	0.092 [*]		0.075 ⁺	0.074 ⁺
ISEI: 42-67		0.002	0.004		0.032	0.031		0.004	0.004
ISEI: 68-90		-0.055	-0.064		0.087 [*]	0.087 [*]		0.080 ⁺	0.081 ⁺
Gender (ref.: men)									
Women		-0.061	-0.066 ⁺		-0.101 ^{***}	-0.099 ^{***}		-0.131 ^{***}	-0.130 ^{***}
Extended req. x minority students			-0.162 [*]			0.082 ⁺			0.049
Youth unemp. rate (log)					0.117	0.117		0.361	0.368
Intercept	0.408 ^{***}	0.340 [*]	0.292 ⁺	1.012 ^{***}	0.771	0.800	1.000 ^{***}	0.696 [*]	0.714 [*]
σ	0.39 ^{***}	0.37 ^{***}	0.37 ^{***}	0.29 ^{***}	0.28 ^{***}	0.28 ^{***}	0.29 ^{***}	0.27 ^{***}	0.27 ^{***}
N	605	605	605	1077	1077	1077	706	706	706

Note: ⁺ $p < 0.1$, ^{*} $p < 0.05$, ^{***} $p < 0.01$. ref = reference category. Estimates based on 100 multiple-imputed datasets. School fixed-effects included. DAB panel study (version 3.0.0); CILS4EU (reduced version 3.3.0); author's calculations.

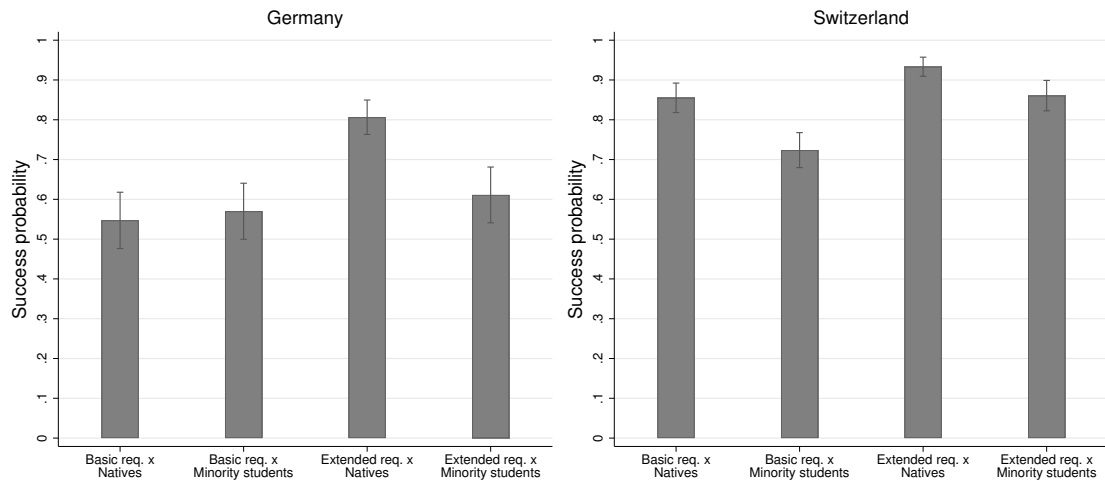


Figure S2: VET success probability with 95% CI separated by country, secondary school certificate and migration background

Notes: Predicted based on the fixed parts of the M3 models in Table S4. *Source:* DAB panel study (version 3.0.0); CILS4EU (reduced version 3.3.0); weighted data; author's calculations.

Table S5: Multilevel linear probability models predicting VET success in Germany (CCA and MI) controlling for secondary school type

	Germany	
	CCA	MI
Migration background (ref.: native)		
Minority student	0.119 ⁺	0.120 ⁺
Secondary school certificate (ref.: basic req.)		
Extended req	0.167***	0.180***
Grade: german (std)	0.040 ⁺	0.044 ⁺
Grade: math (std)	0.106***	0.099***
Competences: read (std)	0.017	0.013
Competences: cognitive (std)	0.005	0.002
Social Origin (HISEI)	0.002*	0.002*
Occupational aspirations (ref.: don't know)		
ISEI: 16-41	0.112	0.141*
ISEI: 42-67	-0.022	0.015
ISEI: 68-90	-0.054	-0.026
Gender (ref.: men)		
Women	-0.050	-0.053
Extended req x minority students	-0.192*	-0.191*
Secondary school type (ref.: else)		
School with basic requirements	-0.098*	-0.084 ⁺
Intercept	0.499***	0.442***
Sd(school)	0.104***	0.113***
σ	0.412***	0.414***
ICC	0.06	0.06
N	584	605

Note: ⁺ $p < 0.1$, * $p < 0.05$, *** $p < 0.01$. ref = reference category. MI-Estimates based on 100 multiple-imputed datasets.

CILS4EU (reduced version 3.3.0); author's calculations.