Appendix A

Literature Overview

Table A.1

Summary of Empirical Findings about the Effects of Goal-setting Interventions in Higher Education

Authors (year)	Type of goal-setting	Study design	Sample	Outcome	Limitations
Bettinger & Baker (2014)	Coaching and Goal setting	Field experiment	13,555 American from private, public and proprietary Ba and Ad undergrad. students	Significant ($p <$ .01) positive effects on retention: 5 percentage point less drop-out	Block randomization; No multilevel analysis or subgroup analysis; Untransparent fidelity
Clark et al. (2019)	Grade goals and Task goals	Field experiment	3,971 first-year Microeconomics course students from an American public University	Robust significant ($p < .001$) positive effect of task-goals on performance for male students. No effect of grade goals	Untransparent fidelity measures; Effect size not reported
Dobronyi et al. (2019)	Reflective goal setting	Field experiment	1,356 First-year Economy students from a Canadian university	No effect on GPA, course credits or persistence. Enough power for a 7% standardized performance effect at $p < .05$	Untransparent fidelity measures. Data analysis of retention (binary) done with OLS instead of logistic regression
Morisano et al. (2010)	Reflective goal-setting	Field experiment	85 Struggling undergraduate students from a	Positive significant ($p < 0.01$) effect (d = .65) on GPA.	Small sample of only struggling students who

			Canadian University		voluntarily joined the experiment
Schippers et al. (2020)	Reflective goal-setting.	Time lagged quasi-experiment with two treatment and two control cohorts.	2.928 first-year students of a Dutch Business School. Treatment cohorts: 1,409. Control cohorts: 1,519	21.6% ($d = .34$, $p < .001$) more course credits obtained in treatment cohorts.	No randomization. Partly transparent fidelity measures.
Schippers et al. (2015)	Reflective goal-setting	Time-lagged quasi-experiment with three control cohorts.	703 (treatment cohort) compared to 2,441 first-year students (control cohorts) from a Dutch business school	On average 22% more obtained course credits. Large effect ($d = .56$, $p < .001$) for minority males (44% more course credits)	No randomization. Partly transparent fidelity measures
Van Lent (2019)	Grade goals (+optional different goals)	Field experiment	2,100 undergraduate Economics students from a Dutch university	No main treatment effect. Does work for students with low GPA. No effect for students who procrastinate or are present biased	The grade for one course is used as dependent variable, not succeeding in multiple courses. Randomization at group level
Van Lent & Souverijn (2020)	Grade goals and mentor encouragement	Field experiment	1,092 first-year Economy students from a Dutch university	Small (9 % of a standard deviation) positive effects on grades through drop-out. Significant for females ($p < .01$)	Randomization at mentor level; Suboptimal delivery fidelity

Note. The search terms "Goal setting" AND "Academic Performance" OR "Academic Success" yielded 144 peer-reviewed records in the Worldcat search engine. All titles and abstracts were screened. All 8 records that used a (quasi-)experimental design to measure the effects of a goal-setting intervention on academic performance (course credits, GPA, or retention) were included in this table.

Appendix B

Extended Data Analysis

Table B.1

Results CFA of T0-T2

model	1st model T0	1st model T1	1st model T2	2nd model T0	2nd model T1	2nd model T2
χ^2	5810.25	4991.94	6484.11	5388.90	4359.32	5496.47
df	1,916	1,916	1,916	1,793	1,793	1,793
p	.000	.000	.000	.000	.000	.000
RMSEA (90% CI)	.046 (.045-.047)	.056 (.054-.058)	.060 (.058-.061)	.046 (.044-.047)	.053 (.051-.055)	.056 (.054-.057)
CFI	.89	.84	.77	.90	.86	.81
TLI	.88	.83	.76	.89	.85	.80

RMSEA = root mean squared error of approximation; CI = confidence interval; CFI = comparative fit index; TLI = Tucker Lewis index). Sample sizes: T0 = 960; T1 = 505; T2 = 666.

Note. Original models with 64 items and final models with 62 items. Models fitted with option 'Categorical', estimated with Weighted Least Squares with Means and Variances (Muthén & Muthén, 1998-2006).

Table B.2

Correlation matrix based on CFA T0 (correlations between constructs without error)

Variables	1	2	3	4	5	6	7	8
1 Grit	-							
2 Self-effic.	.439***							
3 Intrinsic g.	.641***	.495***						
4 Metacogn.	.755***	.428***	.671***					
5 Attention	.656***	.462***	.515***	.594***				
6 Effort reg.	.809***	.445***	.831***	.788***	.550***			
7 Resilience	.681***	.601***	.446***	.471***	.417***	.550***		
8 Engagem.	.481***	.335***	.513***	.544***	.434***	.577***	.390***	
9 PGWB	.355***	.406***	.168***	.318***	.281***	.24***	.510***	.291***

Significance: *$p < .05$; **$p < .01$; ***$p < .001$

Table B.3

Correlation Matrix Based on CFA T1 (correlations between constructs without error)

Variables	1	2	3	4	5	6	7	8
1 Grit	-							
2 Self-effic.	.585***							
3 Intrinsic g.	.646***	.524***						
4 Metacogn.	.660***	.452***	.494***					
5 Attention	.584***	.493***	.415***	.480***				
6 Effort reg.	.758***	.395***	.801***	.828***	.484***			
7 Resilience	.688***	.684***	.457***	.434***	.328***	.424***		
8 Engagem.	.495***	.391***	.736***	.553***	.445***	.673***	.341***	
9 Well-being	.356***	.376***	.122***	.316***	.358***	.190***	.475***	.336***

Significance: *$p < .05$; **$p < .01$; ***$p < .001$

Table B.4.

Correlation Matrix Based on CFA T2 (correlations between constructs without error)

Variables	1	2	3	4	5	6	7	8
1 Grit	-							
2 Self-effic.	.431***							
3 Intrinsic g.	.564***	.339***						
4 Metacogn.	.666***	.396***	.481***					
5 Attention	.631***	.428***	.442***	.483***				
6 Effort reg.	.713***	.278***	.839***	.740***	.455***			
7 Resilience	.634***	.572***	.198***	.369***	.384***	.203***		
8 Engagem.	.509***	.367***	.824***	.509***	.470***	.627***	.235***	
9 Well-being	.353***	.431***	.038	.220***	.272***	.130**	.510***	.263***

Significance: $*p < .05$; $**p < .01$; $***p < .001$

Table B.5.0.

Establishing Random Part with Multilevel Analyses for Course Credits at T1

model	1	2	3
Fixed part			
Intercept	17.75 (.28)	17.24 (.94)	18.71 (2.02)
Random part			
student variance	85.72 (3.62)	77.04 (3.27)	77.06 (3.27)
course variance		10.13 (4.46)	6.36 (3.27)
Faculty variance			6.26 (8.06)
total variance		87.17	89.69
Deviance	8,192.84	8,102.86	8,101.35
Sig. difference of fit		Model 1	Model 2
compared to model		$\chi^2 = 89.97$	$\chi^2 = 1.51$
		$df = 1$	$df = 1$
		$p < .001$	$p =$ n.s.

n.s. = non-significant; df = degrees of freedom.

Table B.5.1

Results Multilevel Analyses of Interaction Effects with Course Credits at T1

model	1	2	3	4
Fixed part				
Intercept	20.33 (.99)	20.45 (1.00)	20.50 (1.00)	20.59 (1.01)
Intervention (=1)	1.09* (.50)	.855 (.59)	.76 (.60)	.57 (.69)
Vocational background (=1)	-3.60*** (.59)	-4.01*** (.82)	-3.57*** (.60)	-3.58*** (.59)
Ethnic minority b. (=1)	-3.54*** (.59)	-3.53*** (.59)	-4.09*** (.81)	-3.56*** (.59)
Male (=1)	-3.20*** (.55)	-3.20*** (.25)	-3.21*** (.55)	-3.74*** (.74)
Intervention*Vocational backgr.		.84 (1.12)		
Intervention*Ethnic min.			1.08 (1.09)	
Intervention*Male				1.07 (1.00)
Random part				
Student variance	69.73 (2.96)	69.70 (2.96)	69.68 (2.96)	69.67 (2.96)
Study program variance	8.99 (3.99)	8.94 (3.97)	8.89 (3.95)	8.85 (3.94)
Total variance	78.72	78.64	78.567	78.52
Deviance	7,990.59	7,990.04	7,989.62	7,989.46
Sig. difference of fit		Model 1	Model 1	Model 1
compared to model		$\chi^2_{(1)} = .55$	$\chi^2_{(1)} = .97$	$\chi^2_{(1)} = 1.13$
		$p =$ n.s.	$p =$ n.s.	$p =$ n.s.

$*p < .05$; $**p < .01$; $***p < .001$; n.s. = non-significant; df = degrees of freedom.

Note. Standard errors are in parentheses. Dependent variable is course credits at T1. Student $N =$ 1,134; Study program $N = 13$; Faculty $N = 2$.

Table B.6.0

Establishing Random Part with Multilevel Analyses for Course Credits at T2

model	1	2	3
Fixed part			
Intercept	42.01 (.67)	41.85 (.96)	42.01 (.67)
Random part			
student variance	508.26 (21.35)	504.23 (21.28)	508.26 (21.35)
course variance		4.79 (4.34)	
Faculty variance			.000 (.000)
total variance	508.26	509.02	508.26
Deviance	10,284.11	10,282.31	10,284.11
Sig. difference of fit		Model 1	Model 1
compared to model		$\chi^2 = 1.78$	$\chi^2 = .00$
		$df = 1$	$df = 1$
		p = n.s.	p = n.s.

$*p < .05$; $**p < .01$; $***p < .001$; n.s. = non-significant ; df = degrees of freedom.

Note. Standard errors are in parentheses. Dependent variable is course credits at T2. Student $N = 1,134$; Study program $N = 13$; Faculty $N = 2$.

Table B.6.1

Results Multilevel Analyses of Interaction (or Moderator) Effects

model	1	2	3	4
Fixed part				
Intercept	49.21 (1.27)	49.72 (1.33)	49.57 (1.34)	50.31 (1.42)
Intervention (=1)	2.53* (1.28)	1.46 (1.50)	1.83 (1.53)	.41 (1.77)
Vocational background (=1)	-9.95*** (1.49)	-4.01*** (.82)	-9.90*** (1.49)	-9.90*** (1.49)
Ethnic minority backg. (=1)	-7.01*** (1.46)	-3.53*** (.59)	-8.18*** (2.04)	-7.07*** (1.459)
Male (=1)	-7.50*** (1.30)	-7.47*** (1.30)	-7.52*** (1.30)	-9.73*** (1.83)
Intervention*Vocational background		3.88 (2.86)		
Intervention* Ethnic minority backg			2.29 (2.78)	
Intervention*Male				4.43 (2.55)
Random part				
Student variance	462.26 (19.41)	461.51 (19.38)	69.68 (2.96)	461.04 (19.36)
Deviance	10,176.53	10,174.68	10,175.84	10,173.53
Sig. difference of fit		Model 1	Model 1	Model 1
compared to model		$\chi^2_{(1)} = 1.85$	$\chi^2_{(1)} = 0.68$	$\chi^2_{(1)} = 3.00$
		p = n.s.	p = n.s.	p = n.s.

$*p < .05$; $**p < .01$; $***p < .001$; n.s. = non-significant ; df = degrees of freedom.

Note. Standard errors are in parentheses. Dependent variable is course credits at T2. Student $N =$ 1,134; Study program $N = 13$; Faculty $N = 2$.

Table B.7

Results Multilevel Growth Analyses 'Effort regulation'

model	1	2	3	4	5
Fixed part					
Intercept	4.02 (.03)	4.08 (.06)	4.08 (.06)	4.05 (.06)	4.04 (.06)
Time	-.28*** (.02)	-.28*** (0.02)	-.28*** (.02)	-.28*** (.02)	-.27 (.02)
Intervention (=1)				.07* (.03)	.08 (.07)
Intervention*Time					-.01 (.03)
Random part					
Student variance	.42 (.01)	.40 (.01)	.40 (.01)	.40 (.01)	.40 (.01)
Study program variance		.02 (.01)	.02 (.01)	.024 (.01)	.024 (.01)
Faculty variance			0.00 (0.00)		
Total variance	.42	.43	.43	.43	.43
Deviance	4,143.46	4,079.67	4,079.67	4,073.59	4,073.52
% expl. var. student level				.25	
% expl. var. course level				-	
% expl. var. total				.23	
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)} = 63.79$	$\chi^2_{(1)} = 0$	$\chi^2_{(1)} = 6.08$	$\chi^2_{(1)}=0.07$
		$p < .001$	$p =$ n.s.	$p < .05$	$p =$ n.s.

*=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s. = non significant)

Note. Standard errors are in parentheses. Dependent variable is Effort regulation, measured 3 times (repeated measures $N = 2,102$; student $N = 1,050$; study program $N = 13$; faculty $N = 2$).

Table B.8

Results Multilevel Growth Analyses 'Self-efficacy'

model	1	2	3	4	5
Fixed part					
Intercept	3.99 (.03)	3.99 (.04)	3.99 (.04)	4.00 (.03)	3.97 (.05)
Time	-.08*** (.02)	-.08*** (.02)	-.08*** (.02)	-.08*** (.02)	-.07** (.02)
Intervention (=1)				.01 (.03)	.04 (.06)
Intervention *time					-.03 (.03)
Random part					
Student variance	.34 (.01)	.33 (.01)	.33 (.01)	.33 (.01)	.33 (.01)
Course variance		.01 (.01)	.01 (.01)	.01 (.01)	.01 (.01)
Faculty variance			.00 (.00)		
Total variance	.34	.35	.35	.35	.35
Deviance	3,712.45	3,674.19	3,674.19	3,674.06	3,673.24
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)} = 38.26$	$\chi^2_{(1)} = 0$	$\chi^2_{(1)} = 0.14$	$\chi^2_{(1)} = 0.82$
		$p < 0.001$	$p =$ n.s.	$p =$ n.s.	$p =$ n.s.

$*p < .05$; $**p < .01$; $***p < .001$; n.s. = non-significant ; df = degrees of freedom.

Note. Standard errors are in parentheses. Dependent variable is self-efficacy, measured 3 times

(repeated measures $N = 2,098$; student $N = 1,045$; course $N = 13$; Faculty $N = 2$)

Table B.9

Results Multilevel Growth Analyses 'Intrinsic goal orientation'

model	1	2	3	4	5
Fixed part					
Intercept	4.48 (0.03)	4.51 (0.05)	4.42 (0.104)	4.41 (0.10)	4.40 (0.11)
Time	-0.27***	-0.26***	-0.26***	-0.27***	-0.25***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Intervention (=1)				0.02 (0.02)	0.05 (0.06)
Intervention *Time					-0.02 (0.03)
Random part					
Student variance	0.31 (0.01)	0.30 (0.01)	0.30 (0.01)	0.30 (0.01)	0.30 (0.01)
Course variance		0.02 (0.01)	0.01 (0.00)	0.007 (0.004)	0.01 (0.00)
Faculty variance			0.02 (0.02)	0.017 (0.020)	0.02 (0.02)
Total variance	0.31	0.32	0.32	0.32	0.32
Deviance	3519.85	3439.34	3434.79	3433.82	3433.57
Sig. difference of fit		Model 1	Model 2	Model 3	Model 4
compared to model		$\chi^2_{(1)} = 80.50$	$\chi^2_{(1)} = 4.56$	$\chi^2_{(1)} = .97$	$\chi^2_{(1)} = .25$
		$p < 0.001$	$p < 0.05$	$p = $ n.s.	$p = $ n.s.

#=sig at 10% (=5% one sided); *=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s.=non significant)

Note. Standard errors are in parentheses. Dependent variable is Intrinsic goal orientation, measured 3 times (repeated measures $N = 2,098$; student $N = 1,049$; study program $N = 13$; faculty $N = 2$)

Table B.10

Results Multilevel Growth Analyses 'Metacognition'

model	1	2	3	4	5
Fixed part					
Intercept	3.53 (0.04)	3.59 (0.06)	3.59 (0.06)	3.58 (0.06)	3.54 (0.07)
Time	-0.19***	-0.19***	-0.19***	-0.19***	-0.17***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.024)
Intervention (=1)				0.02 (0.03)	0.09 (0.07)
Intervention*Time					-0.04 (0.03)
Random part					
Student variance	.46 (.01)	.44 (.01)	.44 (.01)	0.44 (0.01)	.44 (.01)
Course variance		.03 (.01)	.03 (.01)	0.03 (0.01)	.03 (.02)
Faculty variance			.00 (.00)		
Total variance	.46	.48	.48	.48	.48
Deviance	4,320.24	4,265.41	4,265.41	4,264.83	4,263.64
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)} = 54.83$	$\chi^2_{(1)} = 0$	$\chi^2_{(1)} = .58$	$\chi^2_{(1)} = 1.19$
		$p < 0.001$	p = n.s.	p = n.s.	p = n.s.

$*p < .05$; $**p < .01$; $***p < .001$; n.s. = non-significant ; df = degrees of freedom.

Note. Standard errors are in parentheses. Dependent variable is Metacognition, measured 3 times (repeated measures $N = 2,090$; student $N = 1,047$; study program $N = 13$; faculty $N = 2$)

Table B.11

Results Multilevel Growth Analyses 'Attention'

model	1	2	3	4	5
Fixed part					
Intercept	3.657 (0.037)	3.725 (0.063)	3.624 (0.129)	3.699 (0.064)	3.704 (0.072)
Time	-0.188***	-0.187***	-0.187***	-0.187***	-0.190***
	(0.018)	(0.017)	(0.017)	(0.017)	(0.025)
Intervention (=1)				0.051 (0.030)	0.042 (0.071)
Intervention*Time					0.005 (0.035)
Random part					
Student variance	0.494 (0.015)	0.468 (0.015)	0.468 (0.015)	0.468 (0.015)	0.468 (0.015)
Course variance		0.033 (0.015)	0.020 (0.010)	0.033 (0.015)	0.033 (0.015)
Faculty variance			0.025 (0.031)		
Total variance	0.494	0.501	0.513	0.501	0.501
Deviance	4448.077	4367.151	4364.798	4364.298	4364.278
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)}=54.828$	$\chi^2_{(1)}=2.353$	$\chi^2_{(1)}=2.853$	$\chi^2_{(1)}=.020$
		p=<0.001	p=n.s.	p= n.s.	p= n.s.

#=sig at 10% (=5% one sided); *=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s.=non significant)

Note. Standard errors are in parentheses. Dependent variable is Attention, measured 3 times (repeated measures $N = 2,086$; student $N = 1,050$; course $N = 13$; Faculty $N = 2$).

Table B.12

Results Multilevel Growth Analyses 'Resilience'

model	1	2	3	4	5
Fixed part					
Intercept	3.979 (0.028)	3.974 (0.039)	3.974 (0.039)	3.976 (0.041)	3.937 (0.048)
Time	-0.057**	-0.060***	-0.060***	-0.060***	-0.038 (0.020)
	(0.014)	(0.014)	(0.014)	(0.014)	
Intervention (=1)				-0.004 (0.024)	0.073 (0.056)
Intervention*Time					-0.041 (0.027)
Random part					
Student variance	0.300 (0.009)	0.290 (0.009)	0.290 (0.009)	0.290 (0.009)	0.290 (0.009)
Course variance		0.009 (0.004)	0.009 (0.004)	0.009 (0.004)	0.009 (0.005)
Faculty variance			0.000 (0.000)		
Total variance	0.300	0.299	0.299	0.299	0.290
Deviance	3409.137	3357.581	3357.581	3357.553	3355.277
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)}=51.556$	$\chi^2_{(1)}=0$	$\chi^2_{(1)}=0.028$	$\chi^2_{(1)}=2.276$
		p=<0.001	p=n.s.	p= n.s.	p= n.s.

#=sig at 10% (=5% one sided); *=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s.=non significant)

Note. Standard errors are in parentheses. Dependent variable is Resilience, measured 3 times

(repeated measures $N = 2,085$; student $N = 1,046$; course $N=13$; Faculty $N = 2$)

Table B.13

Results Multilevel Growth Analyses 'Grit'

model	1	2	3	4	5
Fixed part					
Intercept	3.741 (0.027)	3.794 (0.039)	3.769 (0.039)	3.745 (0.041)	3.732 (0.048)
Time	-0.124 (0.013)	-0.122***	-0.122***	-0.122***	-0.115***
		(0.013)	(0.013)	(0.013)	(0.019)
Intervention (=1)				0.049* (0.023)	0.075 (0.054)
Intervention*Time					0.014 (0.027)
Random part					
Student variance	0.280 (0.009)	0.274 (0.008)	0.274 (0.008)	0.273 (0.008)	0.273 (0.008)
Course variance		0.010 (0.005)	0.010 (0.005)	0.010 (0.005)	0.010 (0.005)
Faculty variance			0.000 (0.000)		
Total variance	0.280	0.284	0.284	0.283	0.283
Deviance	3294.315	3269.595	3269.595	3264.962	3264.694
% expl. var. student level				.36	
% expl. var. course level				-	
% expl. var. total				.35	
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)}$=24.720	$\chi^2_{(1)}$=0	$\chi^2_{(1)}$=4.633	$\chi^2_{(1)}$=.268
		p=<0.001	p=n.s.	p<.05	p=n.s.

#=sig at 10% (=5% one sided); *=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s.=non significant)

Note. Standard errors are in parentheses. Dependent variable is Grit, measured 3 times (repeated

measures $N = 2,106$; student $N = 1,050$; Course $N = 13$; Faculty $N = 2$)

Table B.14

Results Multilevel Growth Analyses 'Engagement'

model	1	2	3	4	5
Fixed part					
Intercept	3.434 (0.035)	3.487 (0.056)	3.449 (0.080)	3.469 (0.029)	3.471 (0.066)
Time	-0.113 (0.17)	-0.109***	-0.108***	-0.109***	-0.110**
		(0.017)	(0.017)	(0.017)	(0.024)
Intervention (=1)				0.038 (0.029)	0.033 (0.069)
Intervention*Time					0.002 (0.034)
Random part					
Student variance	0.459 (0.014)	0.443 (0.014)	0.443 (0.014)	0.442 (0.014)	0.442 (0.014)
Course variance		0.024 (0.011)	0.020 (0.010)	0.024 (0.011)	0.024 (0.011)
Faculty variance			0.006 (0.010)		
Total variance					
Deviance	4295.159	4244.966	4244.845	4243.316	4243.311
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)}$=50.193	$\chi^2_{(1)}$=0.121	$\chi^2_{(1)}$=1.529	$\chi^2_{(1)}$=.005
		p=<0.001	p=n.s.	p= n.s.	p= n.s.

#=sig at 10% (=5% one sided); *=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s.=non significant)

Note. Standard errors are in parentheses. Dependent variable is Engagement, measured 3 times (repeated measures $N = 2{,}085$; student $N = 1{,}046$; course N=13; Faculty N=2).

Table B.15

Results Multilevel Growth Analyses 'Well-being'

model	1	2	3	4	5
Fixed part					
Intercept	4.803 (0.044)	4.791 (0.067)	4.791 (0.067)	4.791 (0.069)	4.764 (0.080)
Time	-0.282***	-0.286***	-0.286***	-0.286***	-0.272***
	(0.022)	(0.021)	(0.021)	(0.021)	(0.031)
Intervention (=1)				-0.000 (0.037)	0.051 (0.087)
Intervention*Time					-0.028 (0.042)
Random part					
Student variance	0.734 (0.023)	0.694 (0.022)	0.694 (0.022)	0.694 (0.022)	0.693 (0.022)
Course variance		0.033 (0.015)	0.032 (0.015)	0.032 (0.015)	0.032 (0.015)
Faculty variance			0.000 (0.000)		
Total variance	0.734	0.727	0.726	0.726	0.725
Deviance	5246.889	5154.299	5154.299	5154.299	5153.869
Sig. difference of fit		Model 1	Model 2	Model 2	Model 4
compared to model		$\chi^2_{(1)}$=92.590	$\chi^2_{(1)}$=0	$\chi^2_{(1)}$=0	$\chi^2_{(1)}$=0.430
		$p < 0.001$	p = n.s.	p= n.s.	p= n.s.

#=sig at 10% (=5% one sided); *=sig. at 5%; ** sig. at 1%; ***=sig. at 0.1%. (n.s.=non significant)

Note. Standard errors are in parentheses. Dependent variable is General Psychological Well-being, measured 3 times (repeated measures $N = 2,075$; student $N = 1,046$; Study program $N = 13$; Faculty $N = 2$)