

TEACHER EMOTIONS, TEACHING QUALITY, AND STUDENT OUTCOMES

Supplemental Material

Table 1. Results from Multigroup Multilevel SEMs with Freely Estimated Structural Weights across Countries: Direct Effects of Teaching Quality on Student Outcomes in the Enjoyment and Anger Models

Direct Effect	Chile	China	Colombia	Germany	Japan	Mexico	Spain	UK
	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$
Cognitive Activation	0.16/0.21	0.33*/-0.38**	0.13/-0.39*	0.28*/-0.15	0.13/0.04	0.43**/-0.46**	0.27/-0.16	0.45**/-0.30*
on Self-efficacy	3.07/3.33	2.87/2.35	0.43/0.41	-0.05/0.33	0.75*/0.68*	-0.09/0.03	0.42/0.52	1.15/0.41
on Interest	-1.48/-1.89	-0.09/-0.30	0.42/0.50*	0.53/0.79	0.58**/0.56**	0.12/0.09	0.16/0.15	0.42/0.29
on Performance	4.22*/4.84*	3.85/4.35	0.42/0.42	0.63/0.80*	0.70*/0.73*	0.44/0.49	0.60**/0.66**	1.96**/1.78**
Classroom Management	0.16/-0.21	0.18*/-0.23*	-0.01/-0.11	0.46/-0.61*	0.46**/-0.20	0.24/-0.39**	0.39*/-0.38*	0.48**/-0.33*
on Self-efficacy	-1.06/-1.17	-0.92/-0.69	0.40/0.39	-0.01/-0.12	-0.38/-0.24	0.44/0.34	-0.19/-0.30	-0.54/0.29
on Interest	1.64*/1.78*	0.12/0.19	-0.04/-0.11	0.24/0.16	-0.11/-0.05	0.27/0.32	0.30/0.30	0.21/0.38
on Performance	-1.89/-2.16	-1.35/-1.53	0.41/0.40	0.06/-0.05	-0.05/0.07	-0.14/-0.16	-0.39*/-0.41*	-1.24*/-0.87
TS Relationship	0.25/-0.14	0.30**/-0.34**	-0.14/-0.35*	0.55**/-0.65**	0.26**/-0.19	0.33**/-0.40**	0.36*/-0.50**	0.36**/-0.17
on Self-efficacy	-1.72/-1.85	-1.34/-1.12	0.05/0.07	0.25/-0.07	-0.10/-0.11	0.09/0.15	0.62*/0.44	0.05/-0.06
on Interest	0.59/0.84	0.76/0.91	0.50*/0.58**	0.02/-0.24	0.40/0.40	0.52*/0.52*	0.43**/0.48**	0.28/0.24
on Performance	-2.37/-2.68	-2.28/-2.60	-0.47/-0.44*	-0.52*/-0.82	-0.52/-0.61	-0.31/-0.29	-0.08/-0.11	-0.33/-0.56

Note. * $p < .05$. ** $p < .01$. Values in the first row for each indicator of teaching quality represent the standardized direct effects of teacher enjoyment and anger, respectively, on the corresponding quality indicator.

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Table 2. Results from Multigroup Multilevel SEMs with Freely Estimated Structural Weights: Indirect Effects of Teacher Enjoyment and Anger on Student Outcomes via Teaching Quality Dimensions as Mediators

Mediators	Chile	China	Colombia	Germany	Japan	Mexico	Spain	UK
	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$	$\beta_{\text{Joy}}/\beta_{\text{Anger}}$
on Self-efficacy								
via Cognitive Activation	0.50/−0.71	0.95/−0.88	0.06/−0.16	−0.01/−0.05	0.10/0.02	−0.04/−0.01	0.11/−0.08	0.52/−0.12
via Classroom Management	−0.17/0.24	−0.17/0.16	−0.00/−0.04	−0.01/0.07	−0.18/0.05	0.10/−0.13	−0.08/0.12	−0.26/−0.09
via TS Relationship	−0.43/0.26	−0.40/0.38	−0.01/−0.03	0.14/0.05	−0.03/0.02	0.03/−0.06	0.23/−0.22	0.02/0.01
on Interest								
via Cognitive Activation	−0.24/0.40	−0.03/0.11	0.06/−0.20	0.15/−0.12	0.08/0.02	0.05/−0.04	0.04/−0.02	0.19/−0.09
via Classroom Management	0.25/−0.37	0.02/−0.04	0.00/0.01	0.11/−0.10	−0.05/0.01	0.06/−0.13	0.12/−0.11	0.10/−0.12
via TS Relationship	0.15/−0.12	0.22/−0.31	−0.07/−0.20*	0.01/0.16	0.11/−0.08	0.17*/−0.21*	0.16/−0.24*	0.10/−0.04
on Performance								
via Cognitive Activation	0.69/−1.04	1.27/−1.63	0.06/−0.16	0.18/−0.12	0.09/0.03	0.19/−0.23	0.16/−0.10	0.88**/−0.53
via Classroom Management	−0.29/0.44	−0.24/0.35	−0.00/−0.04	0.03/0.03	−0.02/−0.01	−0.03/0.06	−0.15/0.16	−0.59*/0.28
via TS Relationship	−0.59/0.37	−0.67/0.89	0.07/0.15	−0.29/0.53	−0.14/0.12	−0.11/0.12	−0.03/0.06	−0.12/0.09

Note. * $p < .05$. ** $p < .01$