Electronic Supplementary Material 1

Validity of the Perceptions of Inclusion Questionnaire (PIQ)

The Perceptions of Inclusion Questionnaire (PIQ) is based on the German self-report Questionnaire for Assessing Dimensions of Integration of Students (FDI 4-6; Haeberlin, Moser, Bless, & Klaghofer, 1989). The development of the short PIQ scales included an evaluation of the construct validity of the scales (Venetz, Zurbriggen, & Eckhart, 2014). These results were published in German. In order to make the information available to a greater public, it has been summarized in English in this Supplement.

Methods

The data were originally collected in a larger study (Venetz, Tarnutzer, Zurbriggen, & Sempert, 2012). The sample consists of 782 students (46.3% female). 1.7% of the sample was in 4th grade, 8.6% was in 5th grade, and 89.7% were in 6th grade when participating in the survey. The mean age of the sample was 12.2 years ($SD = 0.87$ years). The Likert-type items of the German student version are presented in Table 1. Response categories were 0 = *not at all true*, 1 = *somewhat not true*, 2 = *somewhat true*, and 3 = *certainly true*.

PIQ scale sum scores were correlated with three sources of measures to establish the construct validity. These measures concerned: 1) self-reports of students on their emotional experience during lessons, their achievement goal orientations and their academic self-concept, (2) teacher reports on student's social-emotional skills, and (3) test scores from school performance tests in Mathematics and German (as language of instruction).

The emotional experience during school lessons was measured with the PANAVA short scale (Schallberger, 2005), which is based on the model of positive activation (PA) and negative activation (NA) (Yik, Russell, & Feldman Barrett, 1999). Two methodological approaches (see Kahneman, 1999) were employed: one based on a conventional questionnaire, the second made use of the Experience Sampling Method (ESM; Hektner, Schmidt, & Csikszentmihalyi, 2007). The data from 14 ESM *in situ* measurements during one week were aggregated to a total sum score per student. The academic self-concept was assessed with the subscale absolute self-concept from the Scales for the Assessment of Academic Self-concept (SESSKO; Schöne, Dickhäuser, Spinath, & Stiensmeier-Pelster, 2002). The achievement goal orientations were measured with the subscales mastery goals, performance-approach goals and performance-avoidance goals from the Scales for the Assessment of Learning and Performance Goals (SELLMO; Spinath, Stiensmeier-Pelster, Schöne, & Dickhäuser, 2002). To evaluate the students' social-emotional skills, the teacher version of the SDQ (Goodman, 2001), comprising five subscales (emotional problems, hyperactivity, conduct problems, peer problems and prosocial behavior) was used. Academic achievement was assessed with standardized mathematics and German language tests ("Klassencockpit"; Coray & Geser, 2003).

Results

Table 2 provides an overview of the correlations between the PIQ scales and the measures used for validation. The relationships between the PIQ and the measures of emotional experience during lessons are as expected. Social inclusion, respectively, academic self-concept and the predictors PA and NA (the latter is a negative variable, hence the negative correlations) show low to moderate significant correlations (social inclusion: $r = .26$ / -.25, academic self-concept: $r = .25$ / -.23). The aggregated *in situ* values of emotional experience during lessons show low correlations (social inclusion: $r = .19$ / -.24, academic

self-concept: $r = .17 / -.24$). The correlations between emotional inclusion and emotional experience during lessons are noticeably higher, with $r = .55$ and $r = -.37$ for the retrospective questionnaire and $r = .42$ and $r = -.30$ for aggregated *in situ* measures, respectively.

Also, the expected negative correlation between social inclusion and peer problems (PP) was confirmed. The self-reported social inclusion and the level of problems with peers of the same age, as evaluated by the teacher, show a moderate negative correlation ($r = -.45$). The correlations with the other SDQ-scales are clearly lower, but in all in the expected direction ($.07 \leq |r| \leq .18$).

Academic self-concept has a low correlation with the Scales for the Assessment of Learning and Performance Goals (mastery: $r = .30$, performance-approach: $r = .15$, performance-avoidance: $r = -.22$), a high correlation with absolute academic self-concept ($r = .72$), and show moderate positive correlations with academic achievement in mathematics and German ($r = .46$ and $.40$, respectively).

Table 1

Items of the PIQ scales (German version)

Scale		Item
Emotionale Inklusion	1	Ich gehe gerne in die Schule.
	4	Ich habe keine Lust in die Schule zu gehen. (-)
	7	Mir gefällt es in der Schule.
	10	Die Schule macht Spaß.
Soziale Inklusion	2	Ich habe sehr viele Freundinnen und Freunde in meiner Klasse.
	5	Ich komme mit meinen Mitschülerinnen und Mitschülern sehr gut aus.
	8	In meiner Klasse fühle ich mich allein. (-)
	11	Mit meinen Mitschülerinnen und Mitschülern vertrage ich mich sehr gut.
Akademisches Selbstkonzept	3	Ich lerne schnell.
	6	Ich kann auch sehr schwierige Aufgaben lösen.
	9	Ich bin ein guter Schüler / eine gute Schülerin.
	12	In der Schule ist mir vieles zu schwierig. (-)

Note. (-): recoded items. $0 = $ *stimmt gar nicht*, $1 = $ *stimmt eher nicht*, $2 = $ *stimmt eher*, $3 = $ *stimmt*.

Table 2

Correlations (r) of the PIQ scales with self-reports of emotional experience during lessons, absolute self-concept and achievement goal orientation, teacher reports of social-emotional skills and academic achievement tests.

PIQ scales	Self reports								Teacher reports					Test	
	Emotional experience during lessons				Absolute self-concept	Achievement goal orientation			Social-emotional skills					Academic achievement	
	Retrospective		in situ												
	PA	NA	PA	NA	ASC	MAS	APP	AVO	EP	CP	HY	PP	PRO	MA	GE
Emotional inclusion	**.55**	**-.37**	**.42**	**-.30**	**.28**	**.42**	**.17**	-.04	-.05	**-.16**	**-.14**	**-.10**	**.21**	-.06	-.08
Social inclusion	**.26**	**-.25**	**.19**	**-.24**	**.14**	**.19**	.03	**-.11**	**-.16**	**-.11**	-.07	**-.45**	**.18**	-.03	-.07
Academic self-concept	**.25**	**-.23**	**.17**	**-.24**	**.72**	**.30**	**.15**	**-.22**	**-.29**	**-.15**	**-.28**	-.07	.05	**.46**	**.40**

Note. Sample size: $649 \leq n \leq 744$. Boldface indicates significant correlations ($p < .05$). PA: positive activation, NA: negative activation. ASC: academic self-concept. MAS: mastery goals, APP: performance-approach goals, AVO: performance-avoidance goals, EP: emotional problems, CP: conduct problems, HY: hyperactivity, PP: peer problems, PRO: prosocial behavior. MA: mathematics, GE: German (language of instruction).

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