

## 10 The Questionnaires in School-In

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This chapter presents the questionnaires used in the project School-In (2017–2020), consisting of (1) a teaching staff questionnaire used in the innovation schools and the control schools; (2) a student questionnaire used in the innovation schools; and (3) a student questionnaire used in the video study (chapter 9) related to instruction in the innovation schools.

In School-In, we needed research instruments to map and evaluate the conditions of the schools and to be able to give the schools feedback and stimuli for school development. We developed questionnaires by adapting some existing items and scales from earlier research, but above all, we had to create several new items in order to conduct our research. The teaching staff questionnaire and the student questionnaire related to instruction were developed and piloted before the project began. The student questionnaire was developed at the beginning of the main project because there was a need for additional accompanying data from the participating schools.

The questionnaires were an essential source of data in School-In. A pre-post control group design seemed appropriate for noting changes and effects, and therefore the teaching staff questionnaire was also distributed to parallelised control schools. An overview of the use of the questionnaires in School-In is listed in table 10.1.

**Table 10.1:** The questionnaires in School-In

	Pre	Post
<b>School-In schools (7 schools)</b>	Questionnaire – teaching staff Questionnaire – students Questionnaire related to instruction – student	Questionnaire – teaching staff Questionnaire related to instruction – student
<b>Control schools (6 schools)</b>	Questionnaire – teaching staff	Questionnaire – teaching staff

The *teaching staff questionnaire* was distributed in both the innovation and the control schools. It was distributed at the beginning of the semester to identify development areas, and at the end of the semester to analyse the effects of the intervention in the innovation schools compared to the control schools.

The *student questionnaire* related to the school and its surroundings was administered in 7<sup>th</sup> grade (in 1<sup>st</sup> to 7<sup>th</sup> grade schools) or 8<sup>th</sup> grade (in 1<sup>st</sup> to 10<sup>th</sup> grade schools,

or 8<sup>th</sup> to 10<sup>th</sup> grade school) classes at the beginning of the semester to identify possible development areas of innovation schools from a student perspective.

The *student questionnaire related to instruction* was distributed in the innovation schools at the beginning and at the end of the semester, immediately after the video recording of mathematics lessons in 7<sup>th</sup>, 8<sup>th</sup>, or 9<sup>th</sup> grade. The purpose of the questionnaire was to get an impression of the extent to which links to the local context, clarifications of expectations and roles, as well as other important conditions for inclusion, motivation, and learning processes were embedded in mathematics instruction in the innovation schools.

Challenges connected to the small sample size in School-In were to some degree compensated for by supplementing the data with other existing quantitative data sources from Statistics Norway (SSB) and results of national tests and surveys conducted by the Norwegian Directorate for Education and Training. Additional qualitative data sources (i.e., focus group interviews and student group interviews) allowed for in-depth analyses and a mixed-method approach.

This chapter presents the items used in the School-In study and the scale characteristics with their descriptive values calculated with SPSS 25 (IBM, 2017). The items were translated from Norwegian into English to make them internationally accessible. The information about the items includes mean values ( $M$ ), standard deviations ( $SD$ ), selectivity ( $r_{it}$ ), and Cronbach's alpha value if the item was deleted ( $\alpha$ ). The information at the scale level includes reliability (Cronbach's  $\alpha$ /Spearman Brown's  $\rho$ ), the scale mean ( $M$ ), the standard deviation ( $SD$ ), as well as the sample size ( $N$ ).

## 10.1 The teaching staff questionnaire

The development of the questionnaire for the teaching staff was based on the composition of educational theories and existing empirical findings related to inclusion and the role of school context. Based on our theoretical background, we developed questions related to the local context (Langfeldt, 2015), roles and expectations (Midtsundstad, 2019), and inclusion (Booth & Ainscow, 2002; Göransson & Nilholm, 2014). About 460 (pre) and 340 (post) participants, consisting of both teachers (78.4% (pre)/80.6% (post)) and paraprofessionals (21.6% (pre)/19.4% (post)) from innovation and control schools, filled in the questionnaire at the beginning (pre) and end (post) of the semester. The teaching staff answered the questions on a rating scale from 0 (completely disagree) to 5 (completely agree).

The questionnaire consisted of four parts, plus one extra evaluation part for the innovation schools at the second measuring point. The parts were: (1) teachers'/paraprofessionals' perceptions of what the local community/parents expect from school; (2) teachers'/paraprofessionals' perceptions of what the school can expect from the local context/parents; (3) teachers'/paraprofessionals' perceptions of the school culture (colleagues, class, students); (4) teachers'/paraprofessionals' perceptions of school conditions; and (5) teachers'/paraprofessionals' perceptions of School-In's contribu-

tion to school development (innovation schools only). In this way, we collected data on how staff perceive the relations to the surroundings of the school and expectations from the local context and how they experience expectations, roles, and conditions within their school. In the following, we present the items and scales of the teaching staff questionnaire.

### 10.1.1 Perceptions of what the local community/parents expect from the school

**Table 10.2:** Teaching staff’s perceptions of local context expectations

<i>Intro: The local community expects that ...</i>									
Variable	Item								
Lok_f02	... the school reacts to problems in the local community								
Lok_f13	... the school contributes to a safe local community								
Lok_f17	... the school makes changes in line with local needs								
Lok_f18	... the school contributes to a sound local community								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
Lok_f02	3.73	.987	.511	.778	3.74	.933	.508	.740	
Lok_f13	4.25	.861	.607	.725	4.39	.731	.546	.715	
Lok_f17	3.91	.942	.565	.746	3.89	.887	.517	.730	
Lok_f18	4.21	.826	.705	.680	4.26	.779	.699	.634	
<b>Scale</b>	α=.79 M=4.03 SD=.71 N=461				α=.76 M=4.07 SD=.64 N=340				

**Table 10.3:** Expectations about the school’s reputation

<i>Intro: The local community expects that ...</i>									
Variable	Item								
Lok_f09	... the school is mentioned in the media (i.e., newspapers) in a positive way								
Lok_f21	... the school does not have a poor reputation								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
Lok_f09	4.03	1.077	.614	–	4.11	.912	.631	–	
Lok_f21	4.05	1.170	.614	–	4.22	.907	.631	–	
<b>Scale</b>	ρ=.76 M=4.02 SD=1.03 N=458				ρ=.77 M=4.18 SD=.82 N=342				

**Table 10.4:** Perceived external expectations about follow-up of governmental directives

<i>Intro: The local community expects that ...</i>								
Variable	Item:							
Lok_f06	... the school follows current school legislation							
Lok_f16	... the school follows governmental guidelines							
Pre				Post				
Variable	M	SD	$r_{it}$	$\alpha$	M	SD	$r_{it}$	$\alpha$
Lok_f06	4.85	.465	.597	–	4.87	.390	.745	–
Lok_f16	4.80	.532	.597	–	4.85	.452	.745	–
<b>Scale</b>	$\rho=.75$ M=4.82 SD= .45 N=466				$\rho=.85$ M=4.84 SD= .44 N=346			

**Table 10.5:** Expectations about the school's connection to the local community

<i>Intro: The local community expects that ...</i>								
Variable	Item							
Lok_f01	... the school contributes to students' development of positive relationships with the local community							
Lok_f04	... the school shows interest in the local community							
Lok_f11	... the school uses relevant learning arenas (places/people/activities) in the local community							
Lok_f14	... the school encourages students to participate in the local community							
Lok_f20	... the school considers the local community as a resource for learning							
Pre				Post				
Variable	M	SD	$r_{it}$	$\alpha$	M	SD	$r_{it}$	$\alpha$
Lok_f01	4.24	.781	.488	.787	4.24	.697	.628	.853
Lok_f04	4.20	.830	.596	.755	4.24	.791	.738	.825
Lok_f11	4.03	.887	.576	.762	4.07	.873	.677	.841
Lok_f14	3.93	.945	.609	.751	4.02	.823	.672	.842
Lok_f20	4.14	.873	.636	.742	4.18	.856	.733	.826
<b>Scale</b>	$\alpha=.80$ M=4.10 SD= .65 N=462				$\alpha=.87$ M=4.16 SD= .65 N=343			

**Table 10.6:** Expectations about handling diversity

<i>Intro: The local community expects that ...</i>								
Variable	Item							
Lok_f03	... the school is able to meet students who exhibit challenging behaviour							
Lok_f08	... the school contributes to students' development of respect for fellow persons							
Lok_f10	... the school has space for diversity							
Lok_f15	... the school enables learning for all students							
Pre				Post				
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a
Lok_f03	4.36	.826	.520	.760	4.37	.781	.560	.791
Lok_f08	4.68	.594	.611	.696	4.70	.553	.635	.748
Lok_f10	4.75	.573	.530	.735	4.70	.640	.597	.758
Lok_f15	4.63	.675	.664	.660	4.64	.646	.703	.706
<b>Scale</b>	α=.77 M=4.60 SD=.63 N=467				α=.80 M=4.60 SD=.52 N=346			

**Table 10.7:** Expectations about students' learning and development

<i>Intro: The local community expects that ...</i>								
Variable	Item							
Lok_f05	... the school contributes to the children's personal development							
Lok_f07	... the school helps children to acquire knowledge for future working life							
Lok_f12	... the school enables good student performance							
Lok_f19	... the school contributes to the children's academic competence							
Pre				Post				
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a
Lok_f05	4.65	0.60	.584	.767	4.64	0.58	.591	.790
Lok_f07	4.61	0.71	.619	.753	4.51	0.75	.649	.774
Lok_f12	4.50	0.71	.616	.754	4.61	0.63	.658	.760
Lok_f19	4.78	0.53	.674	.735	4.76	0.53	.691	.754
<b>Scale</b>	α=.80 M=4.63 SD=.51 N=466				α=.82 M=4.62 SD=.52 N=345			

### 10.1.2 Perception of what the school can expect from the local community (parents/guardians, politicians, municipality, media, and others)

**Table 10.8:** Expectations about the follow-up of governmental directives

<i>Intro: At school, we experience that ...</i>									
Variable	Item								
S_oplo6	... parents/guardians are concerned about the school's compliance with current school legislation								
S_opl10	... parents/guardians are concerned that the school follows governmental guidelines								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
S_oplo6	443	4.05	.833	-	339	4.10	.827	-	
S_opl10	443	3.96	.891	-	339	4.05	.887	-	
<b>Scale</b>	ρ=.84 M=3.99 SD=.82 N=456				ρ=.81 M=4.06 SD=.79 N=349				

**Table 10.9:** Support for students' learning and development

<i>Intro: At school, we experience that ...</i>									
Variable	Item								
S_oplo1	... parents/guardians support children's academic development								
S_oplo5	... parents/guardians contribute to children's personal development in a positive way								
S_oplo7	... parents/guardians see the importance of children's competence for future working life								
S_oplo8	... parents/guardians are interested in students' performing well								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
S_oplo1	3.83	.725	.606	.796	3.87	.767	.685	.796	
S_oplo5	3.81	.699	.636	.783	3.91	.730	.656	.808	
S_oplo7	3.88	.788	.693	.756	3.99	.793	.663	.806	
S_oplo8	3.81	.760	.658	.773	3.98	.780	.702	.788	
<b>Scale</b>	α=.82 M=3.83 SD=.60 N=466				α=.84 M=3.93 SD=.63 N=350				

**Table 10.10:** Experience of support from parents and the local community

<i>Intro: At school, we experience that ...</i>									
Variable	Item								
S_oplo2	... the local community supports the school's work with students who exhibit challenging behaviour								
S_oplo4	... parents/guardians are a resource for the school								
S_oplo9	... the local community is interested in the school's current challenges								
S_opl12	... the parents'/guardians' local knowledge is used in school								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
S_oplo2	3.40	.956	.490	.744	3.40	1.023	.679	.757	
S_oplo4	3.76	.873	.529	.726	3.74	.912	.627	.784	
S_oplo9	3.23	1.020	.676	.642	3.29	1.075	.635	.778	
S_opl12	2.91	1.100	.570	.706	3.06	1.128	.643	.776	
<b>Scale</b>	α=.76				α=.82				
	M=3.31				M=3.37				
	SD=.76				SD=.83				
	N=455				N=343				

**Table 10.11:** Expectations of the school's reputation

<i>Intro: At school, we experience that ...</i>									
Variable	Item								
S_oplo3	... the local community talks about the school in a positive way								
S_opl11	... parents/guardians are a resource for the school								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
S_oplo3	3.50	1.034	.728	-	3.56	1.001	.674	-	
S_opl11	3.51	1.036	.728	-	3.67	1.001	.674	-	
<b>Scale</b>	ρ=.79				ρ=.76				
	M=3.49				M=3.61				
	SD=.94				SD=.89				
	N=455				N=343				

### 10.1.3 School-culture

The questions about school culture are related to (1) colleagues (table 10.12 to table 10.17); (2) instruction (table 10.18 to table 10.24); and (3) students (table 10.25 to table 10.28).

**Table 10.12:** Collaboration and sharing culture

Variable	Item	
Kollo1	The colleagues collaborate on teaching/projects	
Kollo4	The colleagues cooperate on planning instruction	
Kollo7	The colleagues share teaching materials	
Koll18	Colleagues are happy to share teaching arrangements	

  

Variable	Pre				Post			
	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Kollo1	4.30	.788	.702	.800	4.14	.876	.749	.836
Kollo4	4.13	.879	.624	.833	4.00	.982	.742	.843
Kollo7	4.26	.865	.705	.797	4.24	.833	.744	.839
Koll18	4.37	.815	.715	.793	4.37	.781	.719	.850
<b>Scale</b>	$\alpha=.85$ M=4.27 SD=.69 N=460				$\alpha=.88$ M=4.19 SD=.74 N=349			

**Table 10.13:** Teaching staff’s view on students’ socio-cultural background

Variable	Item	
Kollo5	The staff complain about the students’ socio-cultural background	
Koll13	Students’ socio-cultural background is important for learning	
Koll19	The students’ background can explain differences in learning outcomes	
Koll20	Colleagues are concerned about the educational background of the students’ parents	
Koll22	The parents’ educational background is relevant for follow-up of school-home collaboration	

  

Variable	Pre				Post			
	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Kollo5	1.79	1.315	.269	.621	1.60	1.271	.412	.671
Koll13	3.84	1.075	.353	.575	3.60	1.145	.330	.699
Koll19	3.23	1.095	.392	.557	2.79	1.289	.512	.628
Koll20	1.53	1.164	.425	.539	1.51	1.165	.594	.598
Koll22	2.31	1.429	.447	.523	2.09	1.440	.456	.655
<b>Scale</b>	$\alpha=.62$ M=2.55; SD=.77 N=446				$\alpha=.70$ M=2.31; SD=.87 N=338			



**Table 10.14:** Staff's joint actions for following up students

Variable	Item
Kollo8	The staff have common ways of making use of the student conversation*
Koll15	The staff enforce common norms for student behaviour
Koll17	The staff have a common approach in conducting student assessment
Koll21	The staff agree with what they expect from the student role

\*In Norway, regular, semi-annual, mutually informing conversations between teacher and student are part of governmental regulations for public schools.

Variable	Pre				Post			
	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Kollo8	3.63	1.190	.478	.727	3.69	1.205	.478	.727
Koll15	3.91	1.081	.506	.692	3.85	.945	.506	.692
Koll17	3.47	1.063	.645	.610	3.58	1.000	.645	.610
Koll21	3.84	.889	.537	.684	3.87	.813	.537	.684
<b>Scale</b>	$\alpha=.77$ M=3.70; SD=.81 N=439				$\alpha=.74$ M=3.75; SD=.74 N=341			

**Table 10.15:** Perceived quality of own teaching staff

Variable	Item
Koll11	Most colleagues are skilled teachers
Koll14	The school has good teachers

Variable	Pre				Post			
	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Koll11	4.52	.617	.633	–	4.68	.259	.599	–
Koll14	4.61	.566	.633	–	4.53	.345	.599	–
<b>Scale</b>	$\rho=.78$ M=4.56 SD=.54 N=465				$\rho=.75$ M=4.59 SD=.50 N=349			

**Table 10.16:** Staff’s well-being and collegial climate

Variable	Item							
Kollo9	The staff are concerned about maintaining good relations with the students							
Koll12	The school has a good working climate							
Koll23	The colleagues get along well with each other							
Pre				Post				
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Kollo9	4.80	.462	.407	.635	4.76	.483	.522	.548
Koll12	4.41	.714	.480	.562	4.46	.663	.456	.642
Koll23	4.66	.572	.545	.442	4.65	.545	.503	.552
<b>Scale</b>	$\alpha$ =.65 M=4.62 SD=.46 N=467				$\alpha$ =.67 M=4.56 SD=.54 N=350			

**Table 10.17:** Transparency about challenges

Variable	Item							
Kollo2	The staff talk about the students’ socio-cultural background							
Kollo3	The staff discuss the school’s everyday issues							
Pre				Post				
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Kollo2	4.11	.911	.554	-	3.99	.972	.485	-
Kollo3	4.43	.785	.554	-	4.42	.721	.485	-
<b>Scale</b>	$\rho$ =.71 M=4.27 SD=.75 N=466				$\rho$ =.65 M=4.20 SD=.76 N=351			

**Table 10.18:** Staff’s beliefs about students’ knowledge of school’s expectations

Variable	Item								
Und04	Students know what expectations of behaviour apply to instruction								
Und10	Students know what is expected of them in class								
Und16	Students know the expectations of participation in instruction								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
Und04	4.29	.735	.667	.702	4.31	.669	.602	.756	
Und10	4.17	.723	.666	.703	4.28	.687	.701	.654	
Und16	4.08	.813	.603	.775	4.11	.797	.621	.747	
<b>Scale</b>	α=.80				α=.79				
	M=4.18;				M=4.23;				
	SD=.64				SD=.61				
	N=464				N=351				

**Table 10.19:** Beliefs about and valuing the local context as a resource in instruction

Variable	Item								
Und05	References to the local context help to make the instruction’s content relevant for the students								
Und11	The parents’ profession is used as a resource in instruction								
Und14	The local context should be given space in the instruction								
Und17	The students’ knowledge of the local context is used in instruction								
Und22	The parents’ local knowledge is used as a resource in instruction								
		Pre				Post			
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
Und05	3.38	1.035	.503	.753	3.66	1.055	.422	.722	
Und11	2.13	1.229	.615	.715	2.24	1.201	.605	.650	
Und14	3.60	.932	.410	.779	3.95	.849	.369	.736	
Und17	3.11	1.016	.619	.716	3.28	.918	.598	.663	
Und22	2.12	1.250	.626	.711	2.35	1.169	.536	.680	
<b>Scale</b>	α=.80				α=.74				
	M=2.83				M=3.08				
	SD=.81				SD=.74				
	N=446				N=341				

**Table 10.20:** Beliefs about and valuing students' role as a resource in instruction

Variable	Item							
Und06	Teaching that allows student input increases the possibility that more students understand							
Und12	Using students in teaching shows they are valued							
Und21	Using students' thoughts and opinions in teaching makes the instruction more interesting							
Und23	Individual student can use other students as a model for the development of their student role							
Ele05	Students contribute with their thoughts and ideas in instruction							
Ele13	Students contribute with their knowledge in instruction							
Pre				Post				
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Und06	4.43	.701	.539	.692	4.47	.605	.499	.686
Und12	4.23	.891	.454	.716	4.33	.790	.488	.685
Und21	4.61	.608	.563	.693	4.63	.543	.468	.697
Und23	3.95	.923	.416	.730	4.14	.809	.442	.701
Ele05	3.83	.804	.503	.699	3.86	.796	.419	.708
Ele13	3.82	.762	.467	.709	3.92	.739	.515	.677
<b>Scale</b>	$\alpha=.74$ M=4.14 SD=.53 N=454				$\alpha=.73$ M=4.23 SD=.47 N=344			

**Table 10.21:** Quality of togetherness

Variable	Item							
Und02	Staff and students have a good tone with each other							
Und08	Staff and students treat each other in a respectful way							
Pre				Post				
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Und02	4.41	.586	.542	-	4.45	.588	.462	-
Und08	4.23	.803	.542	-	4.27	.714	.462	-
<b>Scale</b>	$\rho=.70$ M=4.33 SD=.61 N=468				$\rho=.63$ M=4.36 SD=.56 N=351			

**Table 10.22:** Innovation-inhibiting factors

Variable	Item							
Und01	Facilitating students' mastery is difficult to realise in everyday school life							
Und20	Using the school's local context in teaching is difficult to realise in everyday school life							
Und24	Using the students' input in instruction is difficult to realise in everyday school life							
Pre		Post						
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Und01	2.61	1.290	.405	.335	2.48	1.271	.369	.506
Und20	3.14	1.124	.302	.503	2.90	1.202	.365	.510
Und24	1.63	1.231	.341	.446	1.67	1.273	.430	.411
<b>Scale</b>	$\alpha=.54$				$\alpha=.58$			
	M=2.45				M=2.35			
	SD=.88				SD=.92			
	N=460				N=348			

**Table 10.23:** Exclusionary beliefs about students with challenges

Variable	Item							
Und03	It is the weakest students who disrupt the teaching							
Und07	Difficult questions should only be directed towards students who will master them							
Und15	Most students with challenges need to be addressed separately outside class and classroom							
Pre		Post						
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Und03	1.91	1.277	.337	.304	1.91	1.224	.354	.372
Und07	1.89	1.384	.217	.496	1.91	1.484	.265	.507
Und15	1.99	1.536	.332	.296	1.94	1.512	.362	.336
<b>Scale</b>	$\alpha=.54$				$\alpha=.51$			
	M=1.92				M=1.91			
	SD=.97				SD=1.01			
	N=464				N=349			

**Table 10.24:** Single Items

Variable	Item			
Und13	Every student at our school experiences the same expectations			
Und18	The degree of assignment difficulty should be adapted to the students' prerequisites for mastery			
Und19	In instruction, students get a new chance every day			
Und25	Only the smartest students participate actively in teaching			
Koll16	The teachers contribute to good results in national tests			

  

Variable	Pre		Post	
	M	SD	M	SD
Und13	3.18	1.237	3.28	1.243
Und18	4.43	.763	4.41	.687
Und19	4.31	.840	4.37	.825
Und25	2.61	1.319	2.49	1.313
Koll16	3.76	.914	3.83	.921

**Table 10.25:** Students' social behaviour

Variable	Item			
Ele09	Students help each other with instructional tasks			
Ele14	Students show mutual respect			
Ele17	Students listen to each other			

  

Variable	Pre				Post			
	M	SD	$r_{it}$	$\alpha$	M	SD	$r_{it}$	$\alpha$
Ele09	3.99	.731	.390	.729*	3.96	.750	.395	.729*
Ele14	3.66	.811	.555	.526	3.59	.850	.545	.548
Ele17	3.70	.761	.577	.500	3.65	.785	.592	.487
<b>Scale</b>	$\alpha=.69$ M=3.62 (* Ele09 excluded) SD=.72 N=462				$\alpha=.68$ M=3.75 (* Ele09 excluded) SD=.65 N=351			

**Table 10.26:** Students' potential for change

Variable	Item								
Eleo3	Students' work habits can be improved								
Eleo6	Students' motivation for learning can be changed								
Ele10	Students' involvement in instruction can be changed								
Ele15	Students' behaviour in class can be changed								
		Pre				Post			
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a	
Eleo3	4.03	.824	.313	.818	4.13	.786	.339	.855	
Eleo6	4.04	.845	.621	.671	4.07	.843	.673	.710	
Ele10	3.92	.907	.691	.626	3.93	.896	.720	.682	
Ele15	3.84	.985	.634	.659	3.89	.965	.714	.683	
<b>Scale</b>	$\alpha=.76$				$\alpha=.79$				
	M=3.96				M=4.00				
	SD=.68				SD=.69				
	N=458				N=345				

**Table 10.27:** Students causing concern

Variable	Item								
Eleo4	Students who exhibit non-compliant behaviour cause more concern than others								
Eleo8	Students who exhibit a withdrawn, silent behaviour cause more concern than others								
Ele12	Students who do not collaborate cause more concern than others								
Ele16	Students who do not adapt to school expectations cause more concern than others								
		Pre				Post			
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a	
Eleo4	3.62	1.219	.429	.658	3.63	1.215	.486	.662	
Eleo8	3.77	1.000	.380	.675	3.77	.932	.442	.680	
Ele12	3.32	1.015	.513	.596	3.28	1.008	.483	.656	
Ele16	3.36	1.031	.579	.553	3.38	1.056	.594	.587	
<b>Scale</b>	$\alpha=.69$				$\alpha=.71$				
	M=3.51				M=3.51				
	SD=.77				SD=.77				
	N=456				N=342				

**Table 10.28:** Students as proactive learners

Variable	Item								
Ele02	Students take responsibility for their own learning								
Ele07	Students are eager								
Ele11	Students like to learn								
		Pre				Post			
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a	
Ele02	2.85	.922	.369	.717	2.89	.919	.426	.741	
Ele07	3.62	.796	.584	.412	3.63	.844	.599	.511	
Ele11	3.94	.774	.481	.553	3.97	.778	.553	.580	
<b>Scale</b>	$\alpha$ =.69				$\alpha$ =.70				
	M=3.46				M=3.50				
	SD=.65				SD=.67				
	N=459				N=349				

### 10.1.4 School conditions

**Table 10.29:** Knowledge of the school's expectations

Variable	Item								
Maalfoo1	The staff are aware of the expectations of the school organisation								
Maalfoo2	The colleagues are aware of the requirements that are expected of them in school								
		Pre				Post			
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a	
Maalfoo1	4.06	.846	.761	-	4.07	.767	.737	-	
Maalfoo2	4.26	.731	.761	-	4.30	.722	.737	-	
<b>Scale</b>	$\rho$ =.86				$\rho$ =.85				
	M=4.16				M=4.19				
	SD=.74				SD=.69				
	N=463				N=463				



**Table 10.30:** Common understanding and cohesion among colleagues

Variable	Item							
Maalfoo3	The colleagues stand together to achieve the school's goals							
Maalfoo4	The colleagues have good cohesion							
Pre				Post				
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Maalfoo3	4.32	.767	.645	–	4.34	.681	.578	–
Maalfoo4	4.54	.677	.645	–	4.64	.579	.578	–
Scale	$\rho=.77$				$\rho=.73$			
	M=4.43				M=4.49			
	SD=.66				SD=.56			
	N=465				N=348			

**Table 10.31:** Consistency in expectations between school and staff

<i>Intro:</i>		<i>My school responsibilities ...</i>						
Variable	Item							
Oppgo1	... support my competence development							
Oppgo8	... are designed in my and the school's best interest							
Oppg10	... are a topic I can discuss with the leadership if necessary							
Pre				Post				
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Oppgo1	3.97	.853	.437	.599	4.02	.883	.540	.680
Oppgo8	3.83	.913	.550	.442	3.83	.927	.602	.606
Oppg10	4.23	.938	.420	.626	4.28	.932	.549	.670
Scale	$\alpha=.77$				$\alpha=.74$			
	M=4.00				M=4.04			
	SD=.70				SD=.76			
	N=462				N=347			

**Table 10.32:** Perceived workload

<i>Intro:</i>		<i>My school responsibilities are ...</i>							
Variable	Item								
Oppg04	... perceived as stressful								
Oppg09	... experienced as a heavy workload								
Pre					Post				
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
Oppg04	2.37	1.379	.664	-	2.36	1.402	.710	-	
Oppg09	1.84	1.326	.664	-	1.80	1.407	.710	-	
<b>Scale</b>	ρ=.80 M=2.11 SD=1.24 N=448				ρ=.83 M=2.12 SD=1.34 N=348				

**Table 10.33:** Experienced control

<i>Intro:</i>		<i>My school responsibilities are ...</i>							
Variable	Item								
Oppg03	... formulated based on the school organisation's needs								
Oppg06	... perceived as binding								
Pre					Post				
Variable	M	SD	r <sub>it</sub>	a	M	SD	r <sub>it</sub>	a	
Oppg03	4.00	.844	.333	-	3.96	.968	.351	-	
Oppg06	4.24	.801	.333	-	4.31	.884	.351	-	
<b>Scale</b>	ρ=.50 M=4.12 SD=.71 N=455				ρ=.50 M=4.15 SD=.76 N=347				

### 10.1.5 School-In has contributed to ...

**Table 10.34:** More reflection on activities in

Intro:		School-In has contributed to ...		
Variable	Item			
Bidrago1	... me thinking more than before about my routines in everyday school life			
Bidrago2	... me reflecting more often about my teaching			
Bidrago3	... me being more aware of the student role			
Bidrago5	... me reflecting more often about the sharing culture among the staff			
Bidrag12	... me thinking more often about how I can use the students as a resource in my teaching			
Post only				
Variable	M	SD	$r_{it}$	a
Bidrago1	3.20	1.170	.708	.845
Bidrago2	3.09	1.209	.783	.826
Bidrago3	3.00	1.325	.735	.837
Bidrago5	2.99	1.373	.624	.867
Bidrag12	3.15	1.213	.667	.854
<b>Scale</b>	$\alpha=.87$ $M=3.10$ $SD=1.02$ $N=173$ (post-test, innovation schools)			

**Table 10.35:** Increased initiatives and processes for change in the school

Intro:		School-In has contributed to ...		
Variable	Item			
Bidrago6	... new input and ideas we can realise in everyday school life			
Bidrag11	... processes being initiated and followed up jointly			
Bidrag15	... us realising that even small measures can contribute to change			
Bidrag18	... us starting processes to change something			
Post only				
Variable	M	SD	$r_{it}$	a
Bidrago6	3.81	1.076	.640	.800
Bidrag11	3.34	1.085	.577	.828
Bidrag15	3.75	1.009	.716	.767
Bidrag18	3.87	1.045	.727	.761
<b>Scale</b>	$\alpha=.84$ $M=3.66$ $SD=.87$ $N=172$ (post-test, innovation schools)			

**Table 10.36:** Increased awareness of the local community and the parents' role

<i>Intro: School-In has contributed to ...</i>				
<b>Variable</b>	<b>Item</b>			
Bidrago4	... me thinking more than before about the local context's role in the school			
Bidrago7	... me thinking more than before about the role of parents in school			
Bidrag13	... me using more examples from the local community in instruction			
<b>Post only</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>tt</sub></b>	<b>a</b>
Bidrago4	3.64	1.254	.633	.732
Bidrago7	2.85	1.467	.652	.718
Bidrag13	2.81	1.241	.647	.718
<b>Scale</b>	$\alpha=.84$ $M=3.11$ $SD=1.11$ $N=178$ (post-test, innovation schools)			

**Table 10.37:** Clarity in expressing expectations to students

<i>Intro: School-In has contributed to ...</i>				
<b>Variable</b>	<b>Item</b>			
Bidrag14	... me expressing my expectations for the students in instruction more strongly than before			
Bidrag19	... me being more explicit in what I expect from my students			
<b>Post only</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>tt</sub></b>	<b>a</b>
Bidrag14	2.80	1.323	.801	-
Bidrag19	2.74	1.273	.801	-
<b>Scale</b>	$\rho=.89$ $M=2.76$ $SD=1.23$ $N=170$ (post-test, innovation schools)			

**Table 10.38:** Collaboration and sharing

<i>Intro: School-In has contributed to ...</i>				
<b>Variable</b>	<b>Item</b>			
Bidrag16	... me experiencing that colleagues are interested in my teaching			
Bidrag17	... me experiencing a more robust sharing culture among the staff			
<b>Post only</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>tt</sub></b>	<b>a</b>
Bidrag16	2.92	1.285	.697	–
Bidrag17	2.84	1.357	.697	–
<b>Scale</b>	$\rho=.82$ $M=2.91$ $SD=1.23$ $N=172$ (post-test, innovation schools)			

**Table 10.39:** Negative experiences

<i>Intro: School-In has contributed to ...</i>				
<b>Variable</b>	<b>Item:</b>			
Bidrago8	... new input and ideas that are difficult to realise because there is not enough time			
Bidrago9	... new ideas that are difficult to realise because the staff do not want them			
Bidrag10	... new ideas that are difficult to realise because the given framework conditions do not fit			
<b>Post only</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>tt</sub></b>	<b>a</b>
Bidrago8	3.25	1.208	.277	.586
Bidrago9	1.53	1.101	.296	.549
Bidrag10	2.46	1.227	.542	.133
<b>Scale</b>	$\alpha=.55$ $M=2.47$ $SD=.88$ $N=173$ (post-test, innovation schools)			

## 10.2 Student questionnaire

The student questionnaire was distributed to students in 7<sup>th</sup> (1<sup>st</sup> to 7<sup>th</sup> grade schools) or 8<sup>th</sup> grade (1<sup>st</sup> to 10<sup>th</sup> or 8<sup>th</sup> to 10<sup>th</sup> grade schools). This questionnaire aimed to map students' views of their school before the innovation and was, therefore, only distributed in the innovation schools. The questionnaire was an essential source of information in the decision on a development area. Based on our theoretical background, we developed questions related to the local context (Langfeldt, 2015; Dalehefte & Midtsundstad, 2019), roles and expectations (Midtsundstad, 2019), and inclusion (Booth & Ainscow, 2002; Göransson & Nilholm, 2014).

The sample consisted of 134 students (53.5% boys and 46.5% girls) with the data being collected in seven innovation schools. 53% reported good grades in most subjects, and 49.6% reported receiving support to assist with progress in most subjects if needed. 37.4% of the students reported getting help with their homework in school. Most students seemed to be connected to their place: 65% reported having friends, and 58.4% reported having grandparents who lived nearby; 88.7% felt at home where they were currently living, and 63.6% wanted to live at their present place after finishing school. Nevertheless, 38% reported having lived more than three years in another place. In the following, the scales in the student questionnaire are presented. The students answered the questions on a rating scale from 0 (completely disagree) to 5 (completely agree).

**Table 10.40:** School quality from a student perspective

Variable	Item:			
Sopp107	We have good teachers			
Sopp113	Our school has a good reputation			
Sopp114	Our teachers work well together			
Sopp115	I am proud of my school			
Pre				
Variable	M	SD	$r_{tt}$	$\alpha$
Sopp107	4.13	1.146	.707	.789
Sopp113	3.59	1.258	.631	.822
Sopp114	4.34	.978	.649	.819
Sopp115	3.51	1.436	.765	.765
<b>Scale</b>	$\alpha=.84$			
Skvali	M=3.83			
	SD=1.04			
	N=128 (pre-test only, innovation schools)			

**Table 10.41:** Parents' involvement in school from a student perspective

Variable	Item
Sopplo1	My parents help me with my homework assignments
Sopplo4	My parents are interested in school
Sopplo6	My parents are concerned about good school results
Soppl11	My parents often help out in school

  

Pre				
Variable	M	SD	$r_{it}$	$\alpha$
Sopplo1	4.21	1.264	.691	.695
Sopplo4	4.12	1.275	.722	.680
Sopplo6	4.12	1.226	.506	.779
Soppl11	3.23	1.760	.539	.794
<b>Scale</b>	$\alpha=.79$			
Foreld	M=3.94			
	SD=1.09			
	N=128 (pre-test only, innovation schools)			

**Table 10.42:** Students' link to the local community

Variable	Item
Sopplo3	I participate in activities (sports/youth clubs, etc.) in my local community
Sopplo5	Many students in the classroom participate in the same leisure activities
Sopplo8	I often meet my classmates after school

  

Pre				
Variable	M	SD	$r_{it}$	$\alpha$
Sopplo3	4.14	1.503	.434	.637
Sopplo5	3.46	1.521	.508	.537
Sopplo8	3.74	1.412	.504	.546
<b>Scale</b>	$\alpha=.67$			
Tilkn	M=3.78			
	SD=1.15			
	N=134 (pre-test only, innovation schools)			

**Table 10.43:** Students' well-being in class

Variable	Item
Sopplo2	We care about each other in class
Sopplo9	I enjoy my class
Soppl16	We support each other in class
Soppl19	The students listen to each other

  

Pre				
Variable	M	SD	$r_{it}$	a
Sopplo2	4.06	1.230	.684	.873
Sopplo9	4.30	1.185	.773	.838
Soppl16	3.82	1.277	.802	.826
Soppl19	3.74	1.123	.726	.857
<b>Scale</b>	$\alpha=.88$			
Trivsel	M=3.99			
	SD=1.02			
	N=132 (pre-test only, innovation schools)			

**Table 10.44:** Clarity of expectations in school from a student's perspective

Variable	Item
Soppl22	The teachers have common rules for how students should behave
Soppl25	The teachers can count on us doing mostly as they say
Soppl29	The class knows how the teachers expect the class to behave during instruction

  

Pre				
Variable	M	SD	$r_{it}$	a
Soppl22	3.73	1.428	.554	.680
Soppl25	3.74	1.118	.644	.565
Soppl29	4.14	1.136	.511	.706
<b>Scale</b>	$\alpha=.74$			
Forv	M=3.88			
	SD=.99			
	N=131 (pre-test only, innovation schools)			



**Table 10.45:** Students' experience of being noticed

Variable	Item			
Soppl17	The teachers help me if something is too difficult			
Soppl23	The teachers are interested in the students' opinions			
Soppl24	The teachers notice when I make an extra effort with my homework			
Pre				
Variable	M	SD	$r_{it}$	a
Soppl22	4.31	.913	.618	.729
Soppl25	3.99	1.092	.690	.631
Soppl29	3.68	1.305	.601	.759
<b>Scale</b>	$\alpha=.78$			
Lintor	M=3,98			
	SD=.95			
	N=130 (pre-test only, innovation schools)			

**Table 10.46:** Students' awareness of their own efforts

Variable	Item			
Soppl10	I feel that my efforts in the class play a role			
Soppl12	I know that I can contribute to the instruction			
Pre				
Variable	M	SD	$r_{it}$	a
Soppl10	3.70	1.384	.645	–
Soppl12	3.95	1.273	.645	–
<b>Scale</b>	$\rho=.78$			
Aktiv	M=3,82			
	SD=1.19			
	N=134 (pre-test only, innovation schools)			

### 10.3 Student questionnaire on perceived classroom conditions in mathematics instruction

The student questionnaire on perceived classroom conditions was administered among students in 7<sup>th</sup> (1<sup>st</sup> to 7<sup>th</sup> grade schools), 8<sup>th</sup>, or 9<sup>th</sup> grade (1<sup>st</sup> to 10<sup>th</sup> or 8<sup>th</sup> to 10<sup>th</sup> grade schools) in the innovation schools and aimed to map students' learning conditions and processes in class before and after the innovation process. In combination with video recordings (chapter 9) of mathematics instruction, the questionnaire was to provide insight into students' perceived learning conditions and learning processes in 1–2 classroom sessions in each innovation school.

The sample consisted of 144 students (50.7% boys and 49.3% girls,  $M=13.0$  years;  $SD=.84$ ) from seven innovation schools at measurement point 1. At measurement point 2, the sample decreased to 112 students (53.2% boys and 46.8% girls,  $M=13.22$  years;  $SD=.72$ ) from six innovation schools. Because of the COVID-19 outbreak in March 2019, the second measurement point of the seventh school had to be cancelled.

The questionnaire contained questions about how students experience cognitive and motivational learning processes and perceive learning conditions in class, based on theories and ideas of Prenzel, 1995; Seidel, 2003; Oser & Spychiger, 2005; Ryan & Deci, 2017; Midtsundstad, 2019; and Langfeldt, 2015). Many questions originated from a questionnaire used in the IPN Video Study in physics instruction (Seidel, Prenzel, Kobarg, 2005) but were expanded, reformulated, and modified for the research purposes concerning mathematics instruction in School-In. The students answered the questions on a rating scale from 0 (completely disagree) to 5 (completely agree).

**Table 10.47:** Surface learning processes

Intro:		During the lesson ...							
Variable	Item (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 256–257)								
Over1	... I understood how the lesson was structured								
Over2	... I understood what was most important								
Over3	... I understood what was important and what was less important								
		Pre				Post			
Variable	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a	
Over1	4.14	1.042	.642	.651	4.17	1.112	.744	.745	
Over2	4.09	1.094	.653	.632	4.05	1.161	.773	.712	
Over3	3.76	1.308	.530	.788	3.67	1.301	.613	.878	
<b>Scale</b>	$\alpha=.77$ $M=3.98$ $SD=.97$ $N=140$				$\alpha=.84$ $M=3.98$ $SD=1.02$ $N=111$				

**Table 10.48:** Deep learning processes

<i>Intro: During the lesson ...</i>								
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 256–257)							
Dyb1	... I thought about how different things are connected to each other							
Dyb2	... I tried to imagine procedures in my mind							
Dyb3	... I tried to summarise the most important things in my mind							
<b>Pre</b>				<b>Post</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>
Dyb1	3.50	1.379	.700	.626	3.70	1.379	.716	.803
Dyb2	3.51	1.438	.664	.663	3.53	1.401	.748	.772
Dyb3	3.45	1.384	.517	.819	3.41	1.371	.710	.809
<b>Scale</b>	$\alpha=.79$				$\alpha=.85$			
DYB	M=3.98				M=3.53			
	SD=.97				SD=1.21			
	N=140				N=110			

**Table 10.49:** Knowledge of expectations/processual knowledge

<i>Intro: During the lesson ...</i>								
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 256–257)							
Prosess1	... I always knew what to do							
Prosess2	... I understood what my tasks were							
<b>Pre</b>				<b>Post</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>
Prosess1	3.70	1.343	.707	–	3.81	1.134	.740	–
Prosess2	4.23	1.072	.707	–	4.14	1.111	.740	–
<b>Scale</b>	$\rho=.83$				$\rho=.85$			
PROS	M=3.97				M=3.98			
	SD=1.11				SD=1.04			
	N=137				N=108			

**Table 10.50:** No motivation/external motivation

<i>Intro:</i>		<i>During the lesson ...</i>						
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 258–261)							
Amot1	... I did not want to participate							
Amot2	... I was mentally absent							
Extern	... I paid attention to get as many correct answers as possible on the upcoming test							
	<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>
Amot1	1.65	1.743	.412	.416	1.49	1.679	.420	.411
Amot2	.86	1.225	.455	.406	.97	1.329	.423	.433
Extern	2.04	1.741	.310	.587	1.90	1.655	.322	.570
<b>Scale</b>	$\alpha=.57$				$\alpha=.57$			
AMOT	M=1.50				M=1.48			
	SD=1.17				SD=1.13			
	N=142				N=109			

**Table 10.51:** Introjected motivation

<i>Intro:</i>		<i>During the lesson ...</i>						
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 258–261)							
Intro1	... I participated in the lesson because I always do							
Intro2	... I participated in the lesson because it is something that is expected of me as a student							
Intro3	... I did what was expected of me							
	<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>
Intro1	3.48	1.563	.434	.477	3.37	1.495	.413	.733
Intro2	3.34	1.594	.478	.409	3.11	1.605	.620	.477
Intro3	3.24	1.591	.336	.616	3.05	1.627	.535	.591
<b>Scale</b>	$\alpha=.61$				$\alpha=.70$			
INTRO	M=3.37				M=3.17			
	SD=1.18				SD=1.24			
	N=136				N=109			

**Table 10.52:** Intrinsic/interested state of motivation

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 258–261)								
Intri	... I thought the lesson was exciting								
Inter1	... I wanted to know more about the topic								
Inter2	... I wanted to work more with the topic								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
Intri	2.00	1.654	.679	.870	1.90	1.628	.741	.871	
Inter1	2.54	1.653	.800	.759	2.39	1.504	.759	.854	
Inter2	2.46	1.643	.757	.799	2.40	1.616	.836	.784	
<b>Scale</b>	$\alpha=.87$				$\alpha=.89$				
INTER	M=2.32				M=2.26				
	SD=1.46				SD=1.42				
	N=141				N=110				

**Table 10.53:** Relevance of content

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, p. 262)								
WIR1	... it was obvious that what we learnt was important for us								
WIR2	... we learnt how important the topic was for other subject areas and topics								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WIR1	3.23	1.541	.644	–	3.46	1.433	.543	–	
WIR2	2.70	1.677	.644	–	2.88	1.567	.543	–	
<b>Scale</b>	$\rho=.78$				$\rho=.70$				
WIR	M=3.00				M=3.17				
	SD=1.46				SD=1.33				
	N=135				N=111				

**Table 10.54:** Perceived quality

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, p. 263)								
WIQL1	... the teacher gave an overview of the content we were going to learn								
WIQL2	... I was told what goals we were to achieve through the teaching								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WIQL1	3.63	1.359	.590	-	3.35	1.530	.599	-	
WIQL2	3.50	1.501	.590	-	3.49	1.616	.599	-	
<b>Scale</b>	$\rho=.74$				$\rho=.75$				
WIQL	M=2.32				M=3.42				
	SD=1.46				SD=1.39				
	N=141				N=110				

**Table 10.55:** Perceived enthusiasm and interest

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, p. 264)								
WIL1	... I had the impression that the teacher thought the topic was interesting								
WIL2	... I noticed that the teacher thought it was fun to teach us								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WIL1	4.02	1.192	.639	-	3.98	1.095	.720	-	
WIL2	3.93	1.167	.639	-	4.06	1.137	.720	-	
<b>Scale</b>	$\rho=.78$				$\rho=.84$				
WIL	M=3.90				M=4.02				
	SD=1.16				SD=1.04				
	N=139				N=106				

**Table 10.56:** Perceived autonomy support

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, p. 267)								
WAU1	... I had the opportunity to make my own choices								
WAU2	... I had the opportunity to try things out on my own								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WAU1	3.63	1.338	.497	-	3.25	1.438	.524	-	
WAU2	4.16	1.051	.497	-	3.78	1.332	.524	-	
<b>Scale</b>	$\rho=.66$				$\rho=.69$				
WAU	M=3.90				M=3.53				
	SD=1.05				SD=1.19				
	N=142				N=110				

**Table 10.57:** Perceived competence support

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, p. 266)								
WKU1	... the teacher trusted that we would be able to complete the tasks we were given								
WKU2	... the teacher had the confidence that we were able to solve difficult problems								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WKU1	4.40	.809	.603	–	4.21	1.026	.709	–	
WKU2	4.27	.907	.603	–	4.24	.913	.709	–	
<b>Scale</b>	$\rho=.75$				$\rho=.83$				
WKU	M=4.34				M=4.23				
	SD=.78				SD=.88				
	N=140				N=108				

**Table 10.58:** Perceived social relatedness

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 264–265)								
WSE1	... I felt comfortable in the class								
WSE2	... we had a good atmosphere in the class								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WSE1	4.47	.995	.566	–	4.35	1.068	.589	–	
WSE2	4.04	1.033	.566	–	4.09	1.124	.589	–	
<b>Scale</b>	$\rho=.72$				$\rho=.74$				
WSE	M=4.25				M=4.23				
	SD=.96				SD=.97				
	N=139				N=111				

**Table 10.59:** Perceived recognition by the teacher

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 264–265)								
WSEL1	... I know that the teacher noticed me								
WSEL2	... I had the feeling that my teacher thought I was important								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WSEL1	3.80	1.397	.667	–	4.03	1.216	.623	–	
WSEL2	3.57	1.460	.667	–	3.95	1.360	.623	–	
<b>Scale</b>	$\rho=.80$				$\rho=.77$				
WSEL	M=3.72				M=3.97				
	SD=1.28				SD=1.14				
	N=138				N=111				

**Table 10.60:** Perceived positive learning climate

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 267–269)								
WFK1	... making mistakes was permitted								
WFK2	... I could get help from the teacher if something was too difficult								
	<b>Pre</b>				<b>Post</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WFK1	4.66	.777	.653	–	4.50	1.073	.720	–	
WFK2	4.59	.758	.653	–	4.35	1.200	.720	–	
<b>Scale</b>	$\rho=.79$				$\rho=.84$				
WFK	M=4.61				M=4.42				
	SD=.70				SD=1.05				
	N=141				N=110				

**Table 10.61:** Perceived negative learning climate

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b> (c.f. Seidel, Prenzel, Kobarg, 2005, pp. 267–269)								
WFKN1	... asking questions was embarrassing								
WFKN2	... doing or saying something wrong was embarrassing								
WFKN3	... I was afraid of being the focus of attention								
	<b>Pre</b>				<b>Post</b>				
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
WFKN1	1.42	1.603	.711	.744	1.19	1.419	.786	.819	
WFKN2	1.65	1.720	.699	.753	1.43	1.625	.766	.834	
WFKN3	1.32	1.739	.657	.797	1.38	1.557	.758	.838	
<b>Scale</b>	$\alpha=.83$				$\alpha=.88$				
WFKN	M=1.49				M=1.39				
	SD=1.45				SD=1.40				
	N=139				N=109				



**Table 10.62:** Perceived collaborative culture

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b>								
Samarb1	... the students supported each other								
Samarb2	... the students collaborated well								
Samarb3	... the students helped each other if somebody needed help								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
Samarb1	4.06	1.228	.628	.682	3.82	1.509	.744	.709	
Samarb2	4.06	1.121	.579	.738	3.96	1.175	.615	.835	
Samarb3	3.74	1.393	.647	.665	3.68	1.378	.727	.723	
<b>Scale</b>	α=.78				α=.83				
<b>SAM</b>	M=1.49				M=3.83				
	SD=1.45				SD=1.16				
	N=139				N=105				

**Table 10.63:** Perceived culture for student participation

<i>Intro:</i>		<i>During the lesson ...</i>							
<b>Variable</b>	<b>Item</b>								
Deltak1	... the teacher seemed fine with the students discussing their own solutions or ideas								
Deltak2	... the teacher seemed to appreciate the students' contributions to the lesson								
Deltak3	... the teacher took the students' answers seriously								
		<b>Pre</b>				<b>Post</b>			
<b>Variable</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	<b>M</b>	<b>SD</b>	<b>r<sub>it</sub></b>	<b>a</b>	
Deltak1	4.52	.862	.631	.597	4.20	1.142	.591	.737	
Deltak2	4.36	1.067	.656	.564	4.14	1.070	.667	.645	
Deltak3	4.47	.815	.462	.776	4.37	.939	.605	.721	
<b>Scale</b>	α=.75				α=.78				
<b>DELT</b>	M=4.43				M=4.24				
	SD=.78				SD=.86				
	N=138				N=109				

**Table 10.64:** Perceived links to the local context

Intro:		During the lesson ...						
Variable	Item							
Lokal1	... we used examples from the place where we live							
Lokal2	... familiar examples from our everyday lives were used							
Lokal3	... the teacher used examples from his own life							
Variable	Pre				Post			
	M	SD	$r_{it}$	a	M	SD	$r_{it}$	a
Lokal1	1.28	1.746	.633	.758	1.51	1.711	.634	.388
Lokal2	2.18	1.957	.649	.744	2.76	1.665	.376	.723
Lokal3	1.50	1.813	.686	.703	1.78	1.778	.481	.599
<b>Scale</b>	$\alpha=.81$				$\alpha=.68$			
LOK	M=1.73				M=2.02			
	SD=1.57				SD=1.40			
	N=134				N=107			

## 10.4 Implications for future research and school development

This chapter has presented the items and scales used in the School-In questionnaires. The data show that most scales perform satisfactorily based on reliability criteria. Nevertheless, since this project is rather new and the instruments needed were developed for this purpose, a few scales and items are still not sufficient and will need to be improved for use in further projects. There is a need to investigate the validity and generalisability on a larger sample. Although the qualitative validation performed by comparing the results from the questionnaire with findings from the focus group interviews indicates that the results from the questionnaires coincide with findings from the focus groups, a more sufficient validation of the scales would be of importance. As the teaching staff questionnaire will be available for further schools wishing to work with the School-In approach in the future, we look forward to collecting more data in an expanded area and achieving a sample size that allows for more sophisticated calculations.

We also emphasise that there are still open questions, especially with respect to students' perceptions of changes caused by the intervention. In School-In, we had a comparison between innovation and control schools at the teaching staff level only. Further research could, for instance, compare the innovation and control schools from a student's perspective, also applying the student questionnaires in a pre-post control design.

All in all, we are satisfied with how well the scales performed in identifying development areas in the innovation schools. This initial mapping enabled a tailored intervention in the innovation school, allowing progress in the school development to be

measured after the intervention. Thus, we learnt that the questionnaires in School-In are not only important research instruments for exposing overall effects in a project; they can also be a very useful tool for the school leadership in working with school development. The questionnaires provide the schools with knowledge about areas where they can improve and measuring changes achieved. In this way, the questionnaires serve as an important compass for each individual school in its developmental work.

## References

- Booth, T. & Ainscow, M. (2002). *Index for inclusion: Developing learning and participation in schools*. Centre for Studies on Inclusive Education (CSIE). <https://www.eenet.org.uk/resources/docs/Index%20English.pdf>
- Dalehefte, I. M. & Midtsundstad, J. H. (2019). Linking school's local context to instruction – An important characteristic of the in-service teacher professionalisation in School-In. In T. Janík, I. M. Dalehefte, & S. Zehetmeier (Eds.), *Supporting Teachers: Improving Instruction. Examples of Research-based In-service Teacher Education*, (pp.77–88). Waxmann.
- Göransson, K. & Nilholm, C. (2014). Conceptual diversities and empirical shortcomings – a critical analysis of research on inclusive education. *European journal of special needs education*, 29(3), 265–280. <https://doi.org/10.1080/08856257.2014.933545>
- IBM (2017). *IBM SPSS Statistics for Windows*, Version 25.0. IBM Corp.
- Langfeldt, G. (2015). *Skolens kvalitet skapes lokalt. Presentasjoner av funn fra forskningsprosjektet «Lærende regioner»* [School quality is created locally. Presentations of findings from the research project Learning Regions]. Fagbokforlaget.
- Midtsundstad, J. H. (2019). *Lokal skoleutvikling. Sammenhengen mellom sted, roller og undervisning* [Local school development. The connection between place, roles, and instruction]. Fagbokforlaget.
- Oser, F. & Spychiger, M. (2005). *Lernen ist schmerzhaft: Zur Theorie des negativen Wissens und zur Praxis der Fehlerkultur* [Learning hurts: Negative knowledge in theory and a culture for making mistakes in practice]. Beltz.
- Prenzel, M. (1995). Zum Lernen bewegen. Unterstützung von Lernmotivation durch Lehre. [Movement towards learning. Supporting learning motivation through teaching]. *Blick in die Wissenschaft*, 4(7), 58–66.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications. <https://doi.org/10.1521/978.14625/28806>
- Seidel, T. (2003). Lehr-Lernskripts im Unterricht [Teaching and learning scripts in instruction]. Waxmann.
- Seidel, T., Prenzel, M., & Kobarg, M. (2005). *How to run a video study: Technical report of the IPN Video Study*. Waxmann.