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Teachers' teaching and learning motivation in China

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APPENDICES



Appendix 1 Student questionnaire of teaching quality

For each of the questions below, circle the response that best characterizes how you feel about the statement, A four-point scale is used: 1= Strongly disagree , 2= disagree, 3= agree, and 4= Strongly agree.

	Strongly disagree	disagree	agree	Strongly agree
1. In our class none of the students disturb the lesson	1	2	3	4
2. In our class we are working on tasks that I have to think about very thoroughly	1	2	3	4
3. Our teacher is nice to me even when I make a mistake	1	2	3	4
4. In our class students are quiet when the teacher speaks	1	2	3	4
5. Our teacher cares about me	1	2	3	4
6. Our teacher asks me what I have understood and what I haven't	1	2	3	4
7. Our teacher encourages me when I find a task difficult	1	2	3	4
8. In our class everybody listens and students are quiet	1	2	3	4
9. Our teacher tells me how to do better when I make a mistake	1	2	3	4
10. Our teacher asks questions that I have to think about very thoroughly	1	2	3	4
11. Our teacher likes me	1	2	3	4
12. In our class nobody interrupts with talking	1	2	3	4
13. In our class gives us tasks that seem to be difficult at a first glance	1	2	3	4

14. Our teacher tells me what I'm already good at and what I still have to learn	1	2	3	4
15. In our class everybody follows the teacher	1	2	3	4
16. Our teacher asks what we know about a new topic	1	2	3	4
17. Our teacher is friendly to me	1	2	3	4
18. Our teacher gives us tasks I like to think about	1	2	3	4
19. Our teacher compliments me when I did something good	1	2	3	4
20. Our teacher wants me to be able to explain my answers	1	2	3	4
21. Our teacher believes that I can solve difficult tasks	1	2	3	4

Appendix 2 Classroom observation Form

Scale	Items	Score	Examples, Reasons, Comments
1. Classroom management			
	Ensures efficient classroom management	1,2,3,4,5	
	Ensures the orderly progression of the lesson	1,2,3,4,5	
2. Classroom teaching			
2.1 Safe and stimulating climate	Promotes the mutual respect and interest of students	1,2,3,4,5	
	Supports the self-confidence of students	1,2,3,4,5	
	Shows respect for students in behaviour and language use	1,2,3,4,5	
	Ensures a relaxed atmosphere	1,2,3,4,5	
	Encourage students to do their utmost	1,2,3,4,5	
2.2 Clear instruction	Checks whether students understand the lesson content	1,2,3,4,5	
	Gives clear explanations of the learning materials and assignments	1,2,3,4,5	
	Clarifies the lesson objectives at the start of the lesson	1,2,3,4,5	

	Evaluates whether the objectives have been achieved at the end of the lesson	1,2,3,4,5
	Gives clear instructions and explanations	1,2,3,4,5
	Gives a well-structured lesson	1,2,3,4,5
2.3 Activating teaching	Involves all students in the lesson	1,2,3,4,5
	Uses teaching methods that activate the students	1,2,3,4,5
	Poses questions that encourage thinking	1,2,3,4,5
	Gives feedback on students' answers	1,2,3,4,5
	Uses learning time efficiently	1,2,3,4,5
2.4 Teaching learning strategies	Fosters critical thinking in students	1,2,3,4,5
	Stimulates students to think about solutions	1,2,3,4,5
	Teaches students how to break down complicated problems	1,2,3,4,5
	Let students speak aloud while thinking	1,2,3,4,5
	Teaches students how to check solutions	1,2,3,4,5
	Provides interactive instruction and activities	1,2,3,4,5
2.5 Adaptation of teaching	Adapts the assignments and processing to the relevant differences between students	1,2,3,4,5
	Adapts the instruction to the relevant differences between students	1,2,3,4,5
	Offers struggling learners extra learning or instruction time	1,2,3,4,5
	Supports the self-confidence of struggling learners	1,2,3,4,5

1: Please circle (voluntary) the correct answer: 0=no, I didn't observe this; 1=yes, I have observed this.

Appendix 3. Overview of the quotes from supervisors' comments in terms of classroom management

Classroom management	Students > Supervisors		Students = Supervisors		Students < Supervisors	
	Strong point	Weak point	Strong point	Weak point	Strong point	Weak point
Teacher Number	High (STU)–Medium (OBS): 16, 217, 366, 353 Medium (STU)–Low (OBS): 431, 108, 226, 96		High (STU)–High (OBS): 23 Medium (STU)–Medium (OBS): 114, 63, 333, 283 Low (STU)–Low (OBS): 46		Medium (STU)–High (OBS): 228, 428 Low (STU)–Medium (OBS): 315, 42, 65, 208	
Ensures efficient classroom management	1: '[...] students had the opportunity to express their own ideas' (Teacher 217). 2: '[...] she took a lot of effort to manage the class, it is obvious that she wanted to manage the classroom efficiently' (Teacher 96).	1: 'This teacher was too controlling, she retained full control of the classroom and students' activities. She led students' discussion, students are just followers' (Teacher 226). 2: '[...] the way she managed the classroom is not very interesting, can be boring for students, their minds may wander, and they may miss some important points' (Teacher 217).	1: 'This teacher tried her best to use different management strategies in a limited time. In conclusion, this teacher showed excellent classroom management skills' (Teacher 23).	1 '[...] in order to manage the classroom, she showed too much controlling behaviour. She did not allow students to express their opinions freely' (Teacher 46).	1: '[...] the teacher's organisation and management were relatively efficient' (Teacher 42).	1: 'She arranged many assignments in the lesson and did not give students enough time to express their own ideas' (Teacher 42).

3: '[...] however, she still dominated this lesson and guided students' reflection. Therefore, students were lacking in some time and space for free discussion' (Teacher 96).

Ensures the orderly progression of the lesson

1: '[...] she showed an orderly progression lesson' (Teacher 366).

1: 'This teacher paid much attention to the progression, ignoring the flexibility, it can be boring for students, their minds may wander, and they may miss some important points' (Teacher 217).

2: '[...] it seems that she did not highlight the important points during the progression of the lesson. And the transition of various structures is not very fluent. She failed to

1: 'This teacher wanted to keep the progression is orderly. However, I think she took too much time on the exercise. Consequently, students did not have enough time on the reflection at the end of the lesson' (Teacher 333).

2: '[...] the progression is intensive, it is obvious that she just focused on her own teaching objectives, and try to put as many assignments as possible into her

1: '[...] she showed some progression of the lesson' (Teacher 42).

1: 'She seemed to want to put much knowledge into students' mind in an only 35 minutes course, students seems cannot follow her progression' (Teacher 42).



show the	lesson. It seems
connection and	that students can
logicality	not follow her
between different	ideas' (Teacher
parts' (Teacher	46).
96).	

1: Quotes have been translated from Chinese and edited for length and legibility where applicable.

Appendix 4 Overview of the quotes from supervisors' comments in terms of classroom teaching

Classroom teaching	Students > Supervisors		Students = Supervisors		Students < Supervisors	
	Strong point	Weak point	Strong point	Weak point	Strong point	Weak point
Teacher Number	High (STU)–Medium(OBS): 217, 333, 366, 353 Medium (STU)–Low (OBS): 226, 96		High (STU)–High (OBS): 16 Medium (STU)–Medium (OBS): 46, 428, 63, 283, 114 Low(STU)–Low(OBS): 108, 431		Medium (STU)–High (OBS): 23, 65, 228 Low (STU)–Medium (OBS): 42, 208, 315	
Safe and stimulating climate	1: 'The atmosphere is relaxing, the teacher focused on the interaction with students and used a humorous way to talk with students, his attitude is friendly, the question he posed is also interesting' (Teacher 333). 2: 'This teacher-designed some good interactions and allowed students to speak what they wanted to say to activate students' interest. The	1: '[...] I am a bit doubtful of the effectiveness of the questions she asked' (Teacher 333).	1: 'This teacher created a relaxed atmosphere. She respected students' behaviour and language use, complimented students timely' (Teacher 16). 2: '[...] the atmosphere is comfortable, the teacher showed respect for students in behaviour and language use' (Teacher 46)	1: 'This teacher did not show any effort to create a safe climate, she even didn't allow students to express themselves. It is obvious that this teacher dominated the lesson' (Teacher 431). 2: '[...] although this teacher respected students, she failed to encourage students to develop their confidence in such a relaxed	1: '[...] however, she still showed her respect for the students in behaviour and language use' (Teacher 23).	1: 'It is hard to say the atmosphere is relaxing, the course seemed little intensive.' (Teacher 23). 2: '[...] it is difficult to say this teacher created a good climate' (Teacher 208). 3: '[...] the climate is not good. This teacher failed to design interactive activities to

question she asked is not bad, sometimes even interesting and funny' (Teacher 217).

atmosphere ' (Teacher 46)

motivate students (Teacher 42).

Clear instruction	1: '[...] this teacher gave a clear explanation for the learning materials' (Teacher 217).	1: '[...] it seems that she failed to give clear explanations of the assignments for interactive activities. In addition, she did not show appropriate and clear instruction when students made mistakes and felt confused in the lesson' (Teacher 217).	1: '[...] compared with other teachers, this teacher used more rigorous instruction in the lesson and showed a clear explanation for the learning assignment. Students can clearly and accurately understand the teachings issued by the teacher' (Teacher 16).	1: '[...] the language she used is not very clear, sort of vague.' (Teacher 431).	1: '[...] her instruction is relatively clear' (Teacher 208).
		2: 'This teacher did not check whether students understand knowledge. Sometimes, she did not realise that students might not understand what she said, she just focused on her own teaching	2: '[...] her instruction is clear, Most of the time, students can understand the lesson content' (Teacher 46).	2: '[...] sometimes, she forgot to clarify the lesson objectives at the start of the lesson and to evaluate whether the objectives have been achieved at the end of the lesson' (Teacher 428).	2: '[...] her instruction is clear, students clearly understand their assignments and are doing well' (Teacher 23).

		objective' (Teacher 353).				
Activating teaching	1: 'The teacher constantly posed the questions. She timely praised students who answered questions correctly and used a very soft and gentle tone to speak with students. It is very good' (Teacher 217).	1: '[...] it seems that the question she asked is useless, kind of superficial. Moreover, she did not teach students how to break down complicated problems via her questions and activities. The reason why she used different strategies seems to be that she has to rather than she wants to' (Teacher 217).	1: '[...] she always captures students' ideas and gave appropriate feedback, provided well-designed assignments and interactive instructions to involve all students in the lesson' (Teacher 16).	1: '[...] she failed to involve all students in the lesson, it is obvious that she focused more on good learners and ignored struggling learners' (Teacher 63).	1: 'She provided well-designed assignments and interactive instructions in the lesson, and used various ways to motivate students' (Teacher 23).	1: '[...] almost one-third of students did not actively or passively involve in the lesson' (Teacher 42).
Teaching-learning strategies	'Basically, she can give some comments and tips on students' questions' (Teacher 217).	1: '[...] the quality of her feedback is not good, it cannot help students to reflect on their own answers. Sometimes, the	1: '[...] she also used different strategies to support students' self-confidence and motivate students' interest and	1: '[...] the strategies she used in the lesson are kind of useless, it failed to foster students' ability of critical	1: '[...] Her strategies are appropriate, she always captured students' ideas and gave appropriate	1: '[...] she did not use an effective teaching strategy in her lesson' (Teacher 42).

	feedback is kind of valueless' (Teacher 217).	curiosity'(Teacher 16).	thinking' (Teacher 431).	feedback' (Teacher 23).		
	2: '[...] she should include more teaching instruments into their teaching, such as using ICT technology' (Teacher 366).	2: '[...] she used some teaching strategies and interactive activities to motivate students' learning' (Teacher 63).	2: '[...] sometimes, the strategies she used is kind of useless and valueless' (Teacher 63).	2: '[...] sometimes, she can give appropriate feedback on students' answers' (Teacher 208).		
Adaptation of teaching	1: 'This teacher can adapt some assignments, instructions, and processing to the relevant differences between students' (Teacher 333).	1: 'This teacher ignored struggling learners and only invited good learners to answer her questions. Obviously, she did not involve all the students in her lesson'(Teacher 217).	1: '[...] moreover, she adapted the assignments and processing to the relevant differences between students and showed great concern for weak students, which is extremely important for their self-confidence' (Teacher 16).	1: '[...] she seems only to focus on good students rather than all the pupils '(Teacher 431).	1: '[...] she was not only adapting the assignments to the relevant differences between students, she also showed great concern for weak students' (Teacher 23).	1: '[...] she ignored the importance of adaptation of teaching. I mean, sometimes, the question she posed is too difficult, sometimes is too easy' (Teacher 42).
		2: 'Sometimes, she may focus more on struggling learners, and the assignment is too easy. Sometimes, it seems that the	2: '[...] she adapted the assignments and instruction to the relevant	2: '[...] however, she failed to offer struggling learners extra learning time and develop their confidence' (Teacher 283).		

assignment is too difficult.
(Teacher 333).

differences
between
students'
(Teacher 283).

1: Quotes have been translated from Chinese and edited for length and legibility where applicable

Appendix 5 Overview of scaled variables

Components	Example item	items	Cronbach's Alpha
Teaching quality:			
Classroom teaching	Our teacher is nice to me even when I make a mistake	14	.91
Classroom management	In our class, none of the students disturb the lesson	5	.89
Self-efficacy in teaching			
Efficacy in teaching	How much can you do to help your students value learning	7	.88
Efficacy in classroom management	How much can you do to calm a student who is disruptive or noisy	4	.88
Beliefs about learning			
Conception of student knowledge (Reproductive versus Constructive Knowledge)	It is important that students know definitions by heart, they should be able to say them in their sleep "versus "Students should understand the reasoning behind definitions; in that way they will always be able to derive the definition	4	.64
Conception of student learning ability (Fixed versus Dynamic Ability)	A student's low achievement is often caused by the student's limited ability" versus "A student's low achievement often has a cause that can be helped	5	.67

Conception of student teamwork (Individual versus Social Learning)	When students discuss the subject matter together, they will not be any wiser in the long run” versus “When students discuss together, they learn to handle different points of view and acquire deeper insight	4	.59
Conception of teacher learning ability (Fixed versus Dynamic Ability)	Good teachers are good from the start; weak teachers will always flounder” versus “Teachers are stimulated by their work towards further development	4	.67
Teacher motivation			
Autonomous motivation	I participated because I am interested in knowing more about its instructional skills	10	.94
External regulation	I participated because it was the current policy in my school	3	.83
Introjected regulation	I participated because I would feel uncomfortable if I refused to get involved	3	.62
School organizational conditions:			
Emotional pressure	Are you in your work confronted with stressful moving situations	4	.81
Task autonomy	Can you decide for yourself how you carry out your work	4	.62
Colleague support	my colleague do care how I am functioning	4	.68
Work pressure	Do you need to work extra hard to get your work done	3	.73

**Transformational
leadership**

Teacher educator leadership	I trust the teacher educator at his or her word	5	.90
Principal leadership	The principal at this school encourages teachers to seek and discuss new information and ideas	6	.91
