LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

The Teacher-Class Relationship: Investigating Teachers' Relationships With Their Classes

Inaugural-Dissertation

zur Erlangung des Doktorgrades der Philosophie

an der Ludwig-Maximilians-Universität München

vorgelegt von

Julia Maria Gertrud Roza

aus Starnberg

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Zusammenfassung

In jeder Schulklasse entstehen Beziehungen zwischen Lehrkräften und SchülerInnen, denn sie verbringen viel Zeit miteinander, beteiligen sich zusammen an unterrichtlichen Aktivitäten, und setzen sich gemeinsam mit Inhalten und der Aneignung von Wissen auseinander. Die Beziehungen zwischen Lehrkräften und SchülerInnen sind zeitlich und örtlich begrenzt, stark regelgeleitet, hierarchisch, und zielgerichtet. Diese Beziehungen haben große Auswirkungen auf das schulische Leben von Lehrkräften und SchülerInnen. Nicht erst seit Hattie (2009) wird die Bedeutung von Lehrkräften und deren Beziehung zu SchülerInnen für den schulischen Erfolg von SchülerInnen diskutiert. Gute Lehrer-Schüler-Beziehungen beeinflussen die Motivation, das schulische Engagement und die akademischen Leistungen von SchülerInnen. Doch erst seit ein paar Jahren erlangt die Bedeutung von Lehrer-Schüler-Beziehungen für Lehrkräfte Aufmerksamkeit. Lehrkräfte haben ein Bedürfnis nach Verbundenheit mit ihren SchülerInnen und die Beziehungen zu ihren SchülerInnen beeinflussen das Wohlbefinden und Engagement der Lehrkräfte – stärker sogar als das Gefühl von Verbundenheit mit KollegInnen. Weiterhin lösen die täglichen Interaktionen mit SchülerInnen vielerlei Emotionen bei Lehrkräften aus und die Qualität ihrer Lehrer-Schüler Beziehungen beeinflusst diese Emotionen. Somit sind Lehrer-Schüler-Beziehungen ein bedeutender Faktor, der sich auf den Unterrichts- und Arbeitsalltag jeder Lehrkraft auswirkt.

In der vorliegenden Arbeit wird der Fokus bei der Erforschung von Lehrer-Schüler-Beziehungen auf die Lehrkraft und ihre Beziehungserfahrungen mit SchülerInnen gelegt. Dazu wird zunächst ein Blick auf die Literatur und relevante Konzepte geworfen, welche bisher die Beziehungen zwischen Lehrkraft und SchülerInnen beschrieben haben, sich dabei jedoch auf die Auswirkungen dieser Beziehungen auf SchülerInnen konzentrierten. Es werden drei Ansätze

vorgestellt, die Lehrer-Schüler-Beziehungen aus verschiedenen Perspektiven beleuchten: i) aus Perspektive der psychologischen Beziehungsforschung, welche die Qualität von Lehrer-Schüler-Beziehungen standardisiert misst und mit Schülervariablen in Zusammenhang bringt, ii) aus Perspektive der pädagogischen Forschung zum Thema „Care“ (Fürsorge), welche die Bedeutung von LehrerInnenfürsorge und Beziehungsgestaltung für schulisches Lernen betonen und iii) aus Perspektive der LehrerInnen-Identitätsforschung, welche die Beziehung zu SchülerInnen als integralen Bestandteil der LehrerInnen-Identität diskutiert. Diese unterschiedlichen Perspektiven zusammenfassend lässt sich feststellen, dass die Forschung sich bisher vor allem mit den Einzelbeziehungen zwischen einer Lehrkraft und einer SchülerIn (d.h. dyadisch, zwischen zwei Einzelpersonen) auseinandergesetzt hat. Dabei unterstreicht sie die Notwendigkeit von guten Lehrer-Schüler-Beziehungen für die positive Entwicklung von SchülerInnen und vernachlässigt die Bedeutung dieser Beziehungen für Lehrkräfte. Daher ist es notwendig, die Perspektive der Lehrkräfte auf Lehrer-Schüler-Beziehungen genauer zu untersuchen. Dies hat mehrere Gründe: i) Lehrkräfte brauchen positive Beziehungen zu SchülerInnen: zum Einen erfüllen Lehrkräfte ihren Lehrauftrag, ihre Rolle als Lehrkraft und die Forderungen nach Fürsorge in der Schule, wenn sie durch gute Lehrer-Schüler-Beziehungen die schulische Entwicklung ihrer SchülerInnen fördern. Zum Anderen bestätigen gute Lehrer-Schüler-Beziehungen Lehrkräfte in ihrer Identität, erfüllen das Bedürfnis nach Verbundenheit von Lehrkräften und lösen positive Emotionen bei Lehrkräften aus. ii) SchülerInnen beeinflussen und bedingen die Interaktionen und Beziehungen mit einer Lehrkraft durch ihr Verhalten, ihre Wünsche und Ansichten. Daher liegen gute Lehrer-Schüler-Beziehungen nicht nur in der Verantwortung der Lehrkraft, sondern werden auch durch SchülerInnen aktiv mitgestaltet, indem diese Beziehungsangebote machen auf welche die Lehrkraft reagiert und ihren eigenen Beziehungsbemühungen anpasst. Iii) Lehrkräfte

unterrichten täglich viele SchülerInnen in unterschiedlichen Klassen und die Interaktion mit einzelnen SchülerInnen findet am häufigsten im Klassenverband statt. Die Unterschiede zwischen verschiedenen Klassen wirken sich auch auf die Emotionen und das Interaktionsverhalten der Lehrkraft aus, d.h. Emotionen und Interaktionen sind klassenspezifisch. Zudem sprechen Lehrkräfte über ihre Klassen, indem sie den Klassengruppen spezifische Eigenschaften zuschreiben (z.B.: „Die 7c ist nett.“). Daher kann davon ausgegangen werden, dass Lehrkräfte ihre Klassen als Einheit wahrnehmen und somit auch Beziehungen zu ihren Klassen aufbauen (d.h., nicht-dyadisch, zwischen einem Individuum und einer Gruppe). Dieses Beziehungsphänomen zwischen einer Lehrkraft und der Klasse als Gemeinschaft von SchülerInnen[1] wird im Folgenden *Lehrer-Klassen-Beziehung* genannt.

Bisherige Forschung hat der Lehrer-Klassen-Beziehung noch keine Aufmerksamkeit geschenkt, da die Forschung noch vom Grundgedanken der dyadischen Lehrer-Schüler-Beziehung ausgeht. Jedoch gibt es erste Ergebnisse, die den Einfluss der Beziehung einer Lehrkraft zu den SchülerInnen einer Klasse auf das emotionale Wohlbefinden von Lehrkräften zeigen konnten. Somit war das Ziel der vorliegenden Arbeit die Lehrer-Klassen-Beziehung genauer zu definieren und zu erforschen. Die zentrale Forschungsfrage lautete: „Wie erleben Lehrkräfte ihre Beziehung zu einer Klasse?“. Es wurden zwei Forschungsfragen abgeleitet, die durch jeweils eine empirische Studie beantwortet werden sollten: 1) „Wie kann die Lehrer-Klassen-Beziehung mittels Fragebögen/Selbstbericht erhoben werden?“ und 2) „Wie kann die Lehrer-Klassen-Beziehung mittels eines Modells beschrieben werden?“.

[1] Diese (Zwangs-) Gemeinschaft kann ganz unterschiedlich geartet sein, jedoch besteht sie relativ stabil über mindestens ein Jahr und SchülerInnen und Lehrkraft sind sich über dieses Arrangement bewusst.

In Studie 1 wurde ein Instrument entwickelt und validiert, welches die Lehrer-Klassen-Beziehung aus Sicht der Lehrkräfte erhebt (im folgenden Teacher-Class Relationship, kurz TCR Skala genannt). Auf Basis der existierenden Fragebogenitems zur Erhebung dyadischer Lehrer-Schüler-Beziehungen wurden 13 Items ausgewählt, umformuliert und anhand eines zweistufigen Validierungsprozesses auf ihre inhaltliche und statistische Eignung überprüft. Dazu wurden $N = 56$ Lehrkräfte (60.7% weiblich) anhand von voll-standardisierten Interviews zu den einzelnen Items befragt. In den Interviews wurden die Lehrkräfte dazu angeleitet ihren kognitiven Antwortprozesses für jedes Items zu verbalisieren. Dazu beschrieben die Lehrkräfte ihr allgemeines Verständnis des Items, die aus dem Gedächtnis abgerufenen Informationen zur Beantwortung des Items und ihre Beurteilung des Items anhand der Antwortskala. Die Item-Antworten wurden mittels quantitativer Inhaltsanalyse zuerst induktiv anhand der Daten selbst und dann deduktiv anhand eines Kodierungsschemas codiert. Die Passung jedes Items wurde anhand der Codehäufigkeiten bewertet: i) Anzahl der beziehungsrelevanten Themen innerhalb des Items (gegenüber Anzahl von Themen, die sich um Unterrichten und Klassenführung drehen), sowie ii) Menge an Aussagen, welche sich auf die gesamte Klasse beziehen (gegenüber der Menge an Aussagen welche Verweise auf einzelne SchülerInnen beinhalten). Die beziehungsrelevanten Themen umfassten die Themen *Miteinander*, *Wissen übereinander*, *persönlicher Austausch*, und *gefühlsmäßige Einschätzung*. Klassenbezogene Aussagen enthielten die Referenzen *wir* und *sie* (die Klasse/ die SchülerInnen). Sieben Items erwiesen sich als besonders gut geeignet, um die Lehrer-Klassen-Beziehung zu repräsentieren: eine gute „Beziehung“ und einen guten „Draht“ zur Klasse haben, sich „verbunden“ und „respektiert“ fühlen, der Klasse „vertrauen“ können sowie sich (nicht) „abgelehnt“ fühlen und sich (nicht) zu wünschen die Klasse „nicht unterrichten“ zu müssen. In einer zweiten Befragung mittels

Fragebogen wurden $N = 209$ Lehrkräfte (72.2% weiblich) gebeten die sieben Items der TCR Skala sowie weitere unterrichtsrelevante Skalen zu beantworten. Die Skalen umfassten Emotionen der Lehrkraft beim Unterrichten, Selbstwirksamkeitserleben, emotionale Arbeit und Burnout-Symptome. Es wurde die psychometrische Qualität der Items sowie der TCR Skala überprüft und der Zusammenhang der TCR Skala mit den erhobenen Skalen berechnet. Die statistischen Kennwerte der TCR Skala waren sehr gut: die interne Konsistenz der Skala war hoch ($\alpha = .89$) und das berechnete Faktormodel bestätigte eine einfaktorielle Lösung mit hohen Item-Faktorladungen (> .60). Zudem wurden signifikante Zusammenhänge der TCR-Skala mit den untersuchten Aspekten des Unterrichtserlebens festgestellt: Je besser die Lehrer-Klassen-Beziehung war, desto mehr Freude und desto weniger Ärger und Angst erlebten Lehrkräfte beim Unterrichten. Ebenso erlebten sich Lehrkräfte beim Motivieren der Klasse, beim Auswählen passender Lehrstrategien und bei der Klassenführung wirksamer, wenn die Lehrer-Klassen-Beziehung gut war. Je schlechter die Lehrer-Klassen-Beziehung war, desto mehr emotionale Erschöpfung, mehr Gleichgültigkeit und weniger Leistungserleben berichteten Lehrkräfte. Ebenso berichteten Lehrkräfte, dass sie die von ihnen erlebten Emotionen häufiger maskierten, Emotionen vortäuschten und weniger authentisch Emotionen zeigten, wenn die Lehrer-Klassen-Beziehung schlecht war. Die Ergebnisse von Studie 1 zeigten, dass die Lehrer-Klassen-Beziehung eine wichtige Bedeutung für Lehrkräfte hat und sich ihre Qualität auf das emotionale Wohlbefinden und das Unterrichtserleben der Lehrkräfte auswirkt.

In Studie 2 wurde ein Rahmenmodell der Lehrer-Klassen-Beziehung entwickelt, welches das Beziehungsgeschehen zwischen Lehrkraft und Klasse konzeptuell beschreibt. Anhand eines Literaturüberblicks wurden drei wesentlich Eigenschaften von Lehrer-Schüler-Beziehungen identifiziert und in die theoretische Definition der Lehrer-Klassen-Beziehung integriert: die

Lehrer-Klassen-Beziehung hat i) einen zeitlichen Aspekt, d.h. Beziehung, mentale Repräsentationen der Beziehung und Interaktionsmuster zwischen Lehrkraft und Klasse entwickeln sich mit der Zeit, ii) einen persönlichen Aspekt, d.h. positive Beziehungen zwischen Lehrkraft und Klasse werden durch persönlichen Kontakt geprägt und erfüllen das wechselseitige Bedürfnis nach Verbundenheit; iii) einen akademischen Aspekt, d.h. das Beziehungsgeschehen wird durch das akademische Setting und die professionellen Rollen der Lehrkraft mitbestimmt. Um ein Modell der Lehrer-Klassen-Beziehung zu entwickeln, welches die praktischen Beziehungserfahrungen von Lehrkräften mit ihren Klassen abbildet, wurden N = 9 Interviews aus einer Stichprobe mit Lehrkräften der Sekundarstufe zielgerichtet ausgewählt. Die ausgewählten Lehrkräfte unterrichteten unterschiedliche Klassenstufen und Unterrichtsfächer der Sekundarstufe und waren zu einem ähnlichen Verhältnis weiblich/männlich (55,5% weiblich) sowie Klassenlehrkraft/Fachlehrkraft (55,5% Klassenlehrkraft). Um eine systematische und detaillierte Analyse der Interviews durchzuführen, wurde der Ansatz der Grounded Theory gewählt und die Leitfrage lautete: „Was bedeutet die Lehrer-Klassen-Beziehung für Lehrkräfte?“. Es wurden die wesentlichen Prinzipien der Grounded Theory eingesetzt, welche gewährleisten, dass das entstehende Modell systematisch und kontinuierlich in den Daten verankert ist. i) Mittels der Methode des konstanten Vergleichs wurden die Codierungen der Interviews und die aus den Codierungen entwickelten Konzepte miteinander und untereinander verglichen und ihr Auftreten innerhalb und über alle Interviews hinweg abgeglichen. ii) Mittels der Methode des „theoretical sampling“ wurden die entwickelten Konzepte und deren abgeleitete Eigenschaften in den Daten saturiert, d.h. durch den kontinuierlichen Wechsel von Datensichtung und Datenanalyse wurden die entstehenden theoretischen Konzepte empirisch bestätigt. iii) Mittels theoretischer Integration wurde der

Prozess der Beziehungsbildung als zugrundeliegender Prozess aufgedeckt, welcher das relationale Phänomen der Lehrer-Klassen-Beziehung präzise erfasst und die Unterschiede und Gemeinsamkeiten des Beziehungserlebens von Lehrkräften erklärt. Der relationale Prozess der Beziehungsbildung differenziert Lehrer-Klassen-Beziehungen anhand ihrer Beziehungsqualität auf unterschiedlichen Stufen. Die aus den Daten entstandenen Beziehungskonzepte *Respekt*, *Vertrauen*, *Kommunikation* und *Wissen* stellen die Grundbausteine der Lehrer-Klassen-Beziehung dar und definieren die unterschiedlichen Stufen der Beziehungsqualität. Die Grundbausteine haben jeweils eine akademische und eine persönliche Facette, entwickeln sich mit der Zeit und erfüllen somit die theoretisch postulierten Eigenschaften der Lehrer-Klassen-Beziehung. Zusätzlich wurden vier Mechanismen identifiziert und definiert (gemeinsam *Regeln*, *Aufgaben*, und *Ziele* aufstellen und eine persönliche *Verbindung* herstellen), durch welche Lehrkräfte die Entwicklung der Lehrer-Klassen-Beziehung fördern und deren Beziehungsqualität steigern können. Das entwickelte Modell der Lehrer-Klassen-Beziehung zeigt die wichtige Rolle der Beziehungsqualität zwischen Lehrkraft und Klasse auf. Ebenso unterstreichen die Ergebnisse der Studie den Zusammenhang zwischen der Lehrer-Klassen-Beziehung, dem Funktionieren des Unterrichts im Klassenzimmer und dem emotionalen Wohlbefinden der Lehrkräfte.

Zusammenfassend lässt sich feststellen, dass die Lehrer-Klassen-Beziehung ein wichtiges relationales Phänomen darstellt, welches den Unterrichtsalltag von Lehrkräften vielfältig beeinflusst, aber bisher nicht ausreichend erforscht wurde. Die vorliegende Arbeit leistet einen wesentlichen Beitrag, die Lehrer-Klassen-Beziehung sowohl empirisch als auch theoretisch-konzeptuell zu verstehen und zu beleuchten. In Studie 1 wurde gezeigt, dass die Qualität der Lehrer-Klassen-Beziehung mittels der TCR Skala reliabel, valide und ökonomisch erhoben werden kann. In Studie 2 wurde ein konzeptuelles Rahmenmodell der Lehrer-Klassen-Beziehung

entwickelt, welches die alltäglichen Beziehungserfahrung von Lehrkräften mit ihren Klassen erklären kann. Somit liefern beide Studien wichtige methodische Werkzeuge, um die Qualität der Lehrer-Klassen-Beziehung zu erfassen und die Auswirkungen der Beziehungsqualität auf Lehrkräften besser zu erforschen. Neben diesem Anstoß zur weiteren Erforschung der Lehrer-Klassen-Beziehung liefert die vorliegende Arbeit erste systematische Einblicke in das Beziehungsgeschehen zwischen Lehrkraft und Klasse und dessen Einfluss auf das Wohlbefinden von Lehrkräften.

In beiden Studien wird deutlich, dass die Lehrer-Klassen-Beziehung durch das Zusammenspiel von zwei wesentlichen Bestandteilen gekennzeichnet ist. Zum einen beinhaltet die Beziehung einen akademischen Aspekt, welcher auf den Unterricht und dessen Inhalte und Abläufe bezogen ist. Zum anderen umfasst die Beziehung einen persönlichen Aspekt, welcher sich auf die Gefühl- und Bedürfnisebene bezieht. Der persönlich-gefühlsbezogene Aspekt ist durch das wechselseitige Bedürfnis von Lehrkraft und Klasse nach Verbundenheit und positivem Kontakt gekennzeichnet, welches besonders im informellen Austausch zum Tragen kommt (z.B. bei außercurricularen Themen oder außerschulischen Angeboten). Der unterrichtsbezogene Aspekt ist durch den schulischen Rahmen und die Geschehnisse im Klassenraum als wesentlichem Austragungsort der Lehrer-Klassen-Beziehung geprägt.

Beide Studien zeigen, dass das Beziehungsgeschehen zwischen Lehrkraft und Klasse, d.h. die Lehrer-Klassen-Beziehung, einen bedeutenden Einfluss auf das emotionale Erleben von Lehrkräften hat. Es wurde ein signifikanter Zusammenhang der Lehrer-Klassen-Beziehung mit wichtigen Lehrkraft-Variablen des emotionalen Wohlbefindens festgestellt. Das entwickelte Modell unterstreicht den Zusammenhang zwischen Beziehungsqualität, emotionalem Erleben der Lehrkraft und Bewertung des Unterrichtsablaufs durch die Lehrkraft. Insgesamt korrespondiert

das Erleben der Lehrkraft mit der Qualität der Lehrer-Klassen-Beziehung, d.h. dass eine niedrige Beziehungsqualität ist mit Anstrengung und Frustration verbunden, wogegen eine hohe Beziehungsqualität mit Spaß und Engagement verbunden ist. Weiterhin ist die Beziehungsqualität mit dem Unterrichtsgeschehen assoziiert, d.h. je besser die Qualität der Lehrer-Klassen-Beziehung desto reibungsloser läuft der Unterricht ab und desto interessanter kann die Wissensvermittlung werden. Dieser Zusammenhang zwischen Beziehungsgestaltung und Unterrichtsgeschehen im Sinne von gelungener Klassenführung findet sich auch in der Literatur. Zum Beispiel wird die Nützlichkeit einer relationalen Perspektive auf Unterrichtsprozesse unterstrichen, welche jegliche Unterrichtsführung seitens der Lehrkraft als Interaktions- und Beziehungsgeschehen zwischen Lehrkraft und SchülerInnen versteht.

In beiden Studien klingt der Zusammenhang zwischen der Lehrer-Klassen-Beziehung und der professionellen Identität der Lehrkraft an. In den Interviews und Fragebögen bewerteten die Lehrkräfte die Lehrer-Klassen-Beziehung tendenziell sehr gut und sahen die Beziehungsbildung mit einer Klasse als Teil ihres Berufs. Dies deutet darauf hin, dass die Gestaltung von positiven Lehrer-Klassen-Beziehungen zur professionellen Identität einer Lehrkraft gehört und den zwischenmenschlichen Aspekt des LehrerInnenberufs unterstreicht. Aus der Literatur ist bekannt, dass Lehrkräfte danach streben positive Beziehungen mit SchülerInnen zu entwickeln und dass die Qualität dieser Beziehungen Lehrkräfte in ihrer professionellen Identität bestärkt bzw. schwächt. Ebenso beeinflusst die professionelle Identität, welche Emotionen Lehrkräfte erleben. Daraus lässt sich folgern, dass Lehrkräfte sich als erfolgreich erleben und in ihrer professionellen Identität bestätigt fühlen, wenn die Beziehungsgestaltung mit der Klasse gelungen und positiv ist.

Die Zusammenhänge der Lehrer-Klassen-Beziehung mit den Emotionen, dem wahrgenommenen Unterrichtserfolg und der professionellen Identität von Lehrkräften heben die Bedeutung dieser Beziehung für das emotionale und professionelle Wohlbefinden von Lehrkräften hervor. Auf Basis der Ergebnisse lassen sich Themenfelder für zukünftige Forschung erschließen und praktische Implikationen ableiten, welche Lehrkräften in ihrer Beziehungsgestaltung mit Klassen unterstützen.

Aus den Limitationen der vorliegenden Arbeit ergeben sich Anstöße und Themenfelder für zukünftige Forschung. Beide Stichproben basierten auf der willkürlichen Auswahl von Lehrkräften, da die Lehrkräfte sich mit der Preisgabe von persönlich-berufsbezogenen Informationen und mit einem relativ hohen Zeitaufwand einverstanden erklären mussten (zwischen 1 und 1,5 Schulstunden). Daher ist davon auszugehen, dass sich die teilnehmenden Lehrkräfte grundsätzlich als erfolgreiche Lehrpersonen mit gutem Beziehungs- und Unterrichtsmanagement einschätzten. Dies hat sicher zu der Tendenz beigetragen, dass die Lehrer-Klassen-Beziehungen in beiden Studien sehr positiv beschrieben wurden. Weiterhin überschnitten sich die Interviewstichproben von Studie 1 und Studie 2, da die Interviews zur Modellentwicklung aus der Gesamtstichprobe der Interviews ausgewählt wurden. Dennoch unterscheidet sich das methodische Vorgehen in beiden Studien so stark, dass die Zusammenhänge zwischen den reliabel errechneten Codehäufigkeiten (Studie 1) und den abstrakten, daten-geleiteten Konzepten (Studie 2) im Sinne der Modellgüte gewertet werden können. Dabei stellt das analytische Vorgehen in Studie 2 eine Fortführung der Interviewanalyse in Studie 1 dar: Zuerst wurden die Interviewaussagen anhand ihrer Inhalte codiert und quantifiziert und im Anschluss wurden die bisher unberücksichtigten Sinnzusammenhänge zwischen den inhaltlichen Themen anhand eines Modells dargestellt. Weitere Forschung sollte

dennoch die hier vorgestellten Zusammenhänge replizieren und mit weiteren LehrerInnen- und SchülerInnenvariablen in Verbindung bringen. Weiterhin gilt zu beachten, dass es nicht Gegenstand der vorliegenden Arbeit war eine weitere Perspektive auf die Lehrer-Klassen-Beziehung zu erheben oder zu analysieren, da der Fokus auf dem Erleben der Lehrkräfte lag. Dennoch könnte die Hinzunahme der SchülerInnen-Perspektive auf dieses Beziehungsphänomen neue und gewinnbringende Einsichten liefern. Ebenso war es im Rahmen dieser Arbeit nicht möglich die potenziellen Zusammenhänge zwischen den einzelnen Lehrer-Schüler-Beziehungen in einer Klasse und der Lehrer-Klassen-Beziehung zu berücksichtigen. Es lässt sich jedoch annehmen, dass es Wechselwirkungen zwischen beiden Beziehungsformen gibt, auch wenn die Lehrer-Klassen-Beziehung mehr ist als die Summe der Einzelbeziehungen zu den SchülerInnen einer Klasse. Damit eröffnet sich ein spannendes Forschungsfeld, welches die Lehrer-Klassen-Beziehungen in Zusammenhang mit den bisher gut erforschten Lehrer-Schüler-Beziehungen bringt.

Die praktischen Implikationen der vorliegenden Arbeit richten sich auf die Bedeutung der Lehrer-Klassen-Beziehung für das Wohlbefinden von Lehrkräften. Es lassen sich Präventiv- und Interventionsmaßnahmen ableiten, welche das Wohlbefinden von Lehrkräften stärken, indem sie das beziehungsbezogene Wissen und Verständnis von Lehrkräften erweitern und vertiefen. Zum einen sollte Lehrkräften die Möglichkeit gegeben werden mit systematischer Anleitung ihre eigenen Vorstellungen von Lehrer-Klassen-Beziehungen, ihre allgemeine Beziehungsgestaltung und ihre speziellen Beziehungsmuster mit unterschiedlichen Klassen zu reflektieren.

Zum anderen kann das Rahmenmodell der Lehrer-Klassen-Beziehung von Lehrkräften als Heuristik genutzt werden, um die Qualität ihrer Beziehungen mit unterschiedlichen Klassen und die Bedeutung des Beziehungsprozess zu beobachten, einzuschätzen und gegebenenfalls

Ansatzmöglichkeiten zur Verbesserung der Beziehungsqualität zu erschließen. In Übereinstimmung mit bisheriger Forschung zeigt die vorliegende Arbeit die Notwendigkeit auf, beziehungsfokussierte Maßnahmen in der beruflichen Aus- und Weiterbildung von Lehrkräften zu integrieren, um Lehr- und Lernprozesse effektiv zu fördern.

Die Erforschung der Lehrer-Klassen-Beziehung leistet einen wichtigen Beitrag dazu die Zusammenhänge zwischen dem Beziehungsgeschehen in Klassen und dem Wohlbefinden von Lehrkräften zu entschlüsseln. Daher scheint es wünschenswert und sinnvoll, dass weitere Forschung das Beziehungsphänomen der Lehrer-Klassen-Beziehung erforscht und dabei die Auswirkungen dieser Beziehungen auf Lehrkraft und Klasse tiefer in den Blick nimmt.

Summary

Relationships between teachers and students are formed in every school class: they spend a lot of time together, participate in classroom activities together, and work on content together to share and acquire knowledge. The relationships between teachers and students are limited in time and space, highly rule-governed, hierarchical, and goal-oriented. These relationships have major implications for the school lives of teachers and students. Not only since Hattie (2009), the importance of teachers and their relationships with students for students' academic success has been discussed. Good teacher-student relationships influence student motivation, academic engagement, and academic achievement. However, the importance of teacher-student relationships for teachers has gained attention only recently. Teachers have a need for relatedness with their students, and their relationships with students influence teachers' wellbeing and engagement - more so than their feeling of relatedness with colleagues. Furthermore, daily interactions with students elicit all kinds of emotions in teachers, and the quality of their teacher-student relationships influences these emotions. Thus, teacher-student relationships are a significant factor affecting teachers' day-to-day teaching and work.

In the present thesis, teacher-student relationships will be investigated by focusing on teachers and their relational experiences with students. Therefore, this research takes literature and relevant concepts into consideration that describe teacher-student relationships but focus on the effects of these relationships on students. Three approaches are presented that address teacher-student relationships from different perspectives: i) from the perspective of psychological research on relationships, that measures the quality of teacher-student relationships in standardized ways and relates it to student variables, ii) from the perspective of educational research on care, that emphasizes the importance of teacher care and relationship

building for learning in school, and iii) from the perspective of teacher identity research, that discusses the relationship with students as an integral part of teacher identity. So far, research has primarily addressed the individual relationships between a teacher and a student (i.e., dyadic, between two individuals). Stressing the necessity of good teacher-student relationships for positive student development, the importance of these relationships for teachers has been neglected. Therefore, it is necessary to examine teachers' perspectives on teacher-student relationships in more detail. There are several reasons for this: i) Teachers need positive relationships with students: on the one hand, teachers fulfill their teaching mission, their role as teachers, and their obligation to care for students when they promote their students' academic development through good teacher-student relationships. On the other hand, good teacher-student relationships affirm teachers in their identity, fulfill teachers' need for relatedness, and elicit positive emotions in teachers. ii) Students influence and shape interactions and relationships with teachers through their behaviors, desires, and views. Therefore, good teacher-student relationships are not only within the teachers' responsibility but are also actively created by students who make relational offers to which teachers respond and adapt their own relational efforts. iii) Teachers teach many students in different classes on a daily basis, and interactions with individual students usually take place in the class setting. The differences between various classes also affect the teacher's emotions and interactional behaviors, i.e., emotions and interactions are class-specific. In addition, teachers talk about their classes by attributing specific characteristics to the class as a group (e.g., "7c is nice."). Therefore, it can be assumed that teachers perceive their classes as an entity and thus, establish relationships with their classes (i.e.,

non-dyadic, between an individual and a group). This relational phenomenon between a teacher and the class as community[2] of students is called the *teacher-class relationship*.

So far, research has not yet paid attention to the teacher-class relationship because it is still based on the fundamental idea of dyadic teacher-student relationships. However, first results show that teachers' relationship with students of a class influence their emotional wellbeing. Thus, the purpose of the present thesis was to define and investigate the teacher-class relationship in more detail. The central research question was "How do teachers experience their relationship with a class?" and two research questions were derived that will be answered in two empirical studies: 1) "How can the teacher-class relationship be surveyed using questionnaires/self-report?" and 2) "How can the teacher-class relationship be described using a model?"

In Study 1 an instrument was developed and validated that investigates the teacher-class relationship from the teachers' perspective (henceforth called the Teacher-Class Relationship scale, or TCR scale). Based on existing questionnaire items that address dyadic teacher-student relationships, 13 items were selected, reformulated, and tested in terms of their content-related and statistical quality using a two-stage validation process. For this purpose, $N = 56$ teachers (60.7% female) were asked about each item using fully standardized interviews. In the interviews, teachers were instructed to verbalize their cognitive answering process for each item. Teachers described their general understanding of the item, the information they retrieved from memory to answer the item, and their evaluation of the item using the response scale. The interview statements were coded using quantitative content analysis, in that they were first coded

2 This (coercive) community can be quite different in nature, but it exists relatively stable for at least a year and students and teacher are aware of this arrangement.

inductively and then deductively. The quality of each item was assessed using code frequencies: i) the number of relational themes within the item (versus the number of themes revolving around teaching and classroom management), and ii) the amount of statements referring to the entire class (versus the amount of statements containing references to individual students). The relationship-related themes included *togetherness*, *knowing each other*, *personal exchange*, and *affect*. Class-related statements contained the pronouns *we* and *they* to refer to the class/students of the class. Seven items proved to be particularly well suited to represent the teacher-class relationship: having a good "relationship" and a good "rapport" with the class, feeling "connected" and "respected", being able to "trust" the class, and (not) feeling "rejected" and (not) wishing "not to have to teach" the class. In a second survey using questionnaire, $N = 209$ teachers (72.2% female) were asked to answer the seven items of the TCR scale as well as other teaching-relevant scales. These scales included teachers' emotions during teaching, their self-efficacy beliefs, emotional labor, and burnout symptoms. The psychometric quality of the items and the TCR scale were examined and the correlations between the TCR scale and the teaching-related scales were calculated. The statistical characteristics of the TCR scale were very good: the internal consistency of the scale was high ($\alpha = .89$), and the calculated factor model confirmed a single factor solution with high item factor loadings (> .60). In addition, significant correlations were found between the TCR scale and teachers' teaching experience: The better the teacher-classroom relationship was, the more enjoyment and the less anger and anxiety teachers experienced during teaching. Similarly, teachers experienced themselves as more effective in motivating the class, selecting appropriate teaching strategies, and managing the classroom when the teacher-class relationship was good. The worse the teacher-class relationship was, the more emotional exhaustion, depersonalization, and the less personal achievement teachers reported.

Similarly, teachers reported masking the emotions they experienced more often, faking their emotions, and showing emotions less authentically when the teacher-class relationship was poor. The results of Study 1 indicated that the teacher-classroom relationship is important to teachers and that its quality affects teachers' emotional wellbeing and teaching experience.

In Study 2 a framework model of the teacher-class relationship was developed to conceptually describe the relationship processes between teacher and class. Based on a literature review, three essential characteristics of teacher-student relationships were identified and integrated into the theoretical definition of the teacher-class relationship: the teacher-class relationship has i) a temporal aspect, i.e., relationship, mental representations of the relationship, and patterns of interaction between teacher and class develop over time, ii) a personal aspect, i.e., positive relationships between teacher and class are shaped by personal contact and fulfill the reciprocal need for relatedness; iii) an academic aspect, i.e., relational events are co-determined by the academic setting and the teacher's professional roles. In order to develop a model of the teacher-class relationship that represents teachers' every-day relational experiences with their classes, $N = 9$ interviews were purposefully selected from a sample of secondary teachers. The selected teachers taught different grade levels and subjects in secondary school and were at a similar ratio of female/male (55.5% female) and home-room teacher/subject teacher (55.5% home-room teacher). To conduct a systematic and detailed analysis of the interviews, the grounded theory approach was chosen and the guiding question was, "What does the teacher-classroom relationship mean to teachers?" The key principles of grounded theory were applied which ensure that the emerging model is systematically and continuously grounded in the data: i) using constant comparison, the interview codes and the concepts that were developed from the codes were compared within and across each other, and their occurrence was compared within

and across all interviews; ii) using theoretical sampling, the developed concepts and their derived properties were saturated in the data, i.e., by continuously changing between data review and data analysis, the emerging theoretical concepts were empirically confirmed; iii) using theoretical integration, the process of relationship building was found as the underlying process that accurately captures the relational phenomenon between teacher and class and explains the differences and similarities in teachers' relational experiences. The relational process of relationship building differentiates teacher-class relationships based on their relationship quality at different levels. The relational concepts of *respect*, *trust*, *communication*, and *knowledge* that emerged from the data represent the building blocks of teacher-class relationships and define the different levels of relationship quality. The building blocks have each an academic and a personal facet, evolve over time, and thus, fulfill the theoretically postulated characteristics of the teacher-class relationship. In addition, four mechanisms were identified and defined (jointly setting *rules*, *tasks*, and *goals*, and establishing a personal *bond*) through which teachers can promote the development of the teacher-class relationship and enhance its relationship quality. The developed model of the teacher-class relationship highlights the important role of relationship quality between teacher and class. Likewise, the results of Study 2 emphasize the links between the teacher-class relationship, the general functioning of the classroom, and teachers' emotional wellbeing.

Taken together, the teacher-class relationship is an important relational phenomenon that influences teachers' everyday teaching in many ways, but has not been sufficiently researched so far. This thesis makes a significant contribution to understanding and clarifying the teacher-class relationship both empirically and theoretically-conceptually. The results of Study 1 show that the quality of the teacher-class relationship can be reliably, validly, and efficiently assessed using the

TCR scale. In Study 2 a conceptual framework model of the teacher-class relationship was developed that can explain teachers' everyday relational experiences with their classes. Thus, both studies provide important methodological tools to capture the teacher-class relationship quality and to better explore the effects of relationship quality on teachers. In addition to an impetus for further research on teacher-class relationships, the present thesis provides the first systematic insights into the relationship processes between teacher and class and their impact on teacher wellbeing.

In both studies, it becomes apparent that the teacher-class relationship is characterized by the interplay of two essential components. First, the relationship includes an academic aspect that is related to teaching and its contents and functioning. Secondly, the relationship includes a personal aspect that is related to the level of feelings and needs. The personal-affective aspect is characterized by the mutual need of teacher and class for relatedness and positive contact that comes into play especially in informal exchanges (e.g., discussing extracurricular topics or during extracurricular activities). The teaching-related aspect is characterized by the school setting and the events in the classroom that is the essential place where the teacher-class relationship takes place.

Both studies show that relational phenomenon between teacher and class, i.e., the teacher-class relationship, has a significant impact on teachers' emotional experiences. A significant link between the teacher-class relationship and important teacher variables that indicate emotional wellbeing was found. The developed framework model underlines the links between relationship quality, teacher emotional experience, and teachers’ evaluation of classroom functioning. Overall, teachers’ emotional experiences correspond with the quality of the teacher-classroom relationship, in that low relationship quality is associated with effort and

frustration, whereas high relationship quality is associated with enjoyment and engagement. Furthermore, relationship quality is associated with classroom functioning, in that the better the quality of the teacher-class relationship, the smoother the classroom runs and the more interesting the knowledge transfer can become. This link between relationship building and classroom functioning in terms of successful classroom management is also found in the literature. For example, the usefulness of a relational perspective on classroom processes is underlined, because it considers all classroom management efforts of the teacher as interaction between teacher and students that contributes to their relationship.

In both studies, the link between the teacher-class relationship and teachers' professional identity is recognizable. In the interviews and the questionnaires, teachers tended to rate the teacher-class relationship very highly and viewed relationship building with a class as part of their profession. This suggests that creating positive teacher-class relationships is part of a teacher's professional identity and emphasizes the interpersonal aspect of the teaching profession. This is in line with literature showing that teachers strive to develop positive relationships with students and that the quality of these relationships strengthens or weakens teachers' professional identity. Likewise, teachers' professional identity influences the emotions that teachers experience. Therefore, it can be concluded that teachers experience themselves as successful and feel validated in their professional identity when their relationship with the class is successful and positive.

The links of the teacher-class relationship with teachers' emotions, perceived classroom functioning, and professional identity highlight the importance of this relationship for teachers' emotional and professional wellbeing. Based on the findings, areas for future research can be

identified and practical implications can be derived that support teachers in their relationship building with classes.

The limitations of the present thesis provide ideas for and areas of future research. Both samples were based on convenience samples of teachers, because teachers had to agree to disclose personal-professional information and to spend a relatively large amount of time (between 1 and 1.5 school hours). Therefore, it can be assumed that the participating teachers generally considered themselves to be successful teachers with good relationship competences and classroom management skills. This certainly contributed to the preponderantly positive descriptions of teacher-class relationship in both studies. Furthermore, the interview samples of Study 1 and Study 2 overlapped, because the interviews used to develop the framework model were selected from the total interview sample. However, the methodological procedures in both studies differ to such an extent that the correlations between the reliably calculated code frequencies (Study 1) and the abstract, data-guided concepts (Study 2) can be evaluated in terms of model quality. In this regard, the analytical procedure in Study 2 represents a follow-up to the interview analysis in Study 1: First, the interview statements were coded and quantified based on their content, and then the previously unconsidered context between the themes was shown in a model. Nevertheless, further research should replicate the shown links and relate them to additional teacher and student variables. Furthermore, it should be noted that it was not the purpose of this paper to survey or analyze another perspective on the teacher-class relationship, because the focus was on the teachers' experience and perspective. However, adding the students' perspective on this relationship phenomenon could provide new and fruitful insights. Similarly, it was not within the scope of this thesis to consider the potential links between the individual teacher-student relationships in a class and the teacher-class relationship. It is, however,

reasonable to assume that interactions between the two types of relationships exist, even though the teacher-class relationship is more than the sum of the individual relationships with the students of a class. This opens an exciting field of research that associates teacher-class relationships to the previously well-researched teacher-student relationships.

The practical implications of the present thesis focus on the importance of the teacher-class relationship for teachers' wellbeing. Preventive and intervention measures can be derived that strengthen teachers' wellbeing by broadening and deepening teachers' relational knowledge and understanding. On the one hand, teachers should be given the opportunity to systematically reflect on their own ideas about teacher-class relationships, their patterns of behavior to build relationships, and their specific relationship patterns with different classes.

On the other hand, teachers can use the teacher-class relationship framework as a heuristic method to observe and evaluate the quality of their relationships with different classes and the meaning of the relationship process, and, if necessary, identify levers to improve relationship quality. Consistent with previous research, this thesis demonstrates the need to integrate relationship-focused interventions into teacher trainings and teachers’ professional development to effectively promote teaching and learning processes.

Research on teacher-class relationships makes an important contribution to unraveling the links between relationship processes within the classroom and teacher wellbeing. Therefore, it seems desirable and worthwhile that further research explores teacher-class relationships, taking a closer look at the effects of these relationships on teachers and teaching.

Content

Introduction

Teaching is a social and caring profession. Thus, it is more than providing subject matter, applying didactics, and using instructional strategies and techniques. Teaching involves – above all – daily interaction with students who are grouped into classes. In secondary schools, teacher and class meet and interact with each other under specific circumstances: students do not choose the class, the subject, or the teacher who teaches the subject; and teachers teach several classes each year of which some classes they already know and chose to teach and other classes they do not know yet and were assigned to teach. Additionally, most teachers have one home-room class for which they are responsible in terms of organization and coordination of school matters and several other classes in which they "only" teach their subject. Overall, teacher and students are obligated to deal with each other, and their interaction is highly structured and dictated by the school environment. Curricula, standards for teacher and student performance, school and state policies, societal and educational demands, and expectations determine the environment in which teachers and students meet. Within this institutionalized setting, teacher and class spend time together, establish routines, and share information and experiences – they develop relationships.

For teachers, working with children and building relationships with students is a major motivation to choose and stay in this profession. Furthermore, teachers are expected to create and maintain supportive relationships which their students as part of their educational mandate. The call for good teacher-student relationships comes from different sides. Psychological research provides convincing evidence that positive relationships with teachers enhance students' development and learning (Leitz, 2015; Mainhard et al., 2011). Initiated by educational reformers, educational researchers argue that the pedagogical relationship between teacher and student is a central element to successful education (Diers, 2016; Thies, 2017). Additionally,

neuroscientists claim that trusting relationships are fundamental to any learning and thus, students need positive relationships with their teachers for their cognitive development in school (Bauer, 2008; Hüther, 2004). In his popular book "Visible learning" (2009), Hattie points out the significant role that teachers play in students' academic performance and shows that the teacher-student relationship ranks third out of ten teacher variables influencing students' learning. Thus, it is not surprising that teachers feel the obligation to create flourishing relationships with their students not only to increase students' learning, but also to perceive themselves as successful teachers. Teachers' ideas about what it means to be a teacher are reflected in their professional identity that develops constantly as negotiation between their personal views on teaching and the societal expectations and standards of teaching that they encounter. How and why teachers develop relationships with students is part of their professional identity and guides their interpersonal behavior and emotions in the interaction. In addition to the educational demands for good teacher-student relationships, teachers have the same personal need for positive relationships as their students. Feeling related to somebody and belonging to a group is a basic human need that causes positive emotions and wellbeing (Ryan & Deci, 2017)(Deci&Ryan?). Students are the regular interaction partners of teachers and therefore, teachers feel the need to build positive relationships with them that satisfy their need for relatedness and positive contact.

As every social interaction, teachers' interactions with their students evoke emotions in the teachers. Social interactions are a source of emotions because the behavioral response and affective expression of the interaction partner serve as signal to evaluate the situation regarding its importance, conduciveness and concordance with one's goals, values, and needs. Thus, teachers' emotions in the interactions with students are caused by their evaluation of the social situation in terms of their personal needs (e.g., feeling connected to their students) and their

professional goals (e.g., fulfilling certain teaching standards). In addition to teachers' individual and professional goals, the interaction is evaluated with regard to the social context and its socially accepted norms and rules of behavior. In order to maintain their professional roles in the school setting, teachers need to manage their emotions and show them by respecting certain display rules (e.g., "Do not shout at students" or "Do not cry in front of the class"). Furthermore, teachers need to channel their emotions to connect with their students and to understand students' personal and academic struggles. Interactions with students can evoke a kaleidoscope of teacher emotions, from satisfying and joyous to frustrating and exhausting. Thus, teachers' emotional lives are directly linked to their interactions with students and their ability to create and maintain positive relationships with them. Despite this fact, the curriculum of a student teacher to become a secondary school teacher in Germany centers around the following contents: two subject matters, didactics of these subjects, and some courses in educational studies. This priority of content shows that the emotional and relational side of teaching is fairly neglected in teacher education. Every teaching activity, however, involves the interaction with students and encompasses an emotional and relational response of the teacher.

Teaching is a demanding profession and teachers try to fulfill their various duties and roles under unfavorable working conditions. Looking at a teacher's timetable, teachers hop between different classes, classrooms, and subjects every day. They face very heterogenous classes and need to balance the students' individual needs within these classes. To make teaching fruitful, they have to adapt to each class and its specific atmosphere, group dynamic, learning pace, and learning conditions. The class itself is a cohesive social system that has its own classroom norms and rules and is characterized by the cohesion or divergence of its students. Thus, the class is a prominent point of reference for teachers, and it seems very plausible that the

class forms an entity in the mind of a teacher and becomes a relationship partner to the teacher. The need to conceptualize classes as specific entities is supported by the fact that teachers attribute specific characteristics to and talk about their classes, for instance “the 7c is very nice”.

Therefore, in this thesis, a teacher’s relationship with a specific class is the focal point of interest, henceforth called the *teacher-class relationship*. So far, teachers’ relationships with their classes have not been investigated yet, even though the interest in teacher-student relationships has been growing for several decades. To address this research gap, the overarching goal of the present study was to explore teachers’ relational experiences with the classes they teach and thus, to investigate teacher-class relationships from the teachers’ perspective. By answering the leading research question “How do teachers experience their relationships with classes?”, the present thesis strives to expand the knowledge and understanding of teacher-student relationships by focusing on the so far neglected relationship between teacher and class.

To study teacher-class relationships, a humanistic view on teachers and teaching was chosen. Based on the humanistic assumptions, teachers are knowledgeable, capable, and have the best intentions for their students. Nevertheless, they only stay motivated and engaged in teaching when they are healthy as defined by the WHO as “a state of complete physical, mental, and social wellbeing” (World Health Organization, 2003, p. 7). Thus, the present thesis considers the “whole” teacher in that it includes teachers’ emotions, needs, and goals and underlines the interpersonal nature of teaching. The ultimate goal was to help teachers understand the relational processes between them and their classes to promote their wellbeing. To do so, the teachers’ perspective was investigated to gain a realistic picture of teaching as institutionalized job that involves teaching several classes instead of supporting the idealistic notion of teaching as one-on-one relation between teacher and student. Using the teachers’ perspective, teacher-class

relationships were investigated from the inside rather than the outside, that is describing teachers' everyday experience and their evaluations instead of societal and normative expectations of how teachers should interact with their students.

1. Theoretical Background

To understand the theoretical background of teachers' relationships with students, an extensive literature review was conducted to identify lines of research that contribute to the knowledge and conceptualization of teacher-student relationships. Three lines of research that use relevant concepts to describe the interpersonal processes and relationships between teachers and students were selected: research i) assessing the quality of relationships and interactions between teachers and students, ii) discussing the importance of care in schools, and iii) investigating the interpersonal aspect of teachers' professional identity and teacher roles. The first line of research assesses the quality of teacher-student relationships and investigates its links with student outcomes. The second line of research analyzes the characteristics of caring teachers, whereby the different definitions of teachers' caring behavior share the aspect of creating good relationships with students. The third line of research studies the different aspects of teachers' professional identities including different teacher roles (e.g., caregiver, disciplinarian, instructor) and interpersonal aspects that guide teachers' interactions and relationships with students.

Teacher-Student Relationships

Teacher-student relationships have been studied for several decades and different research approaches exist that investigate the effects of these relationships on students' outcomes. These approaches exist within the fields of education and psychology and describe teacher-student relationships from either teachers' or students' perspectives. They encompass

models of social support, socialization, and classroom climate as well as frameworks that are based on attachment theory, interpersonal theory, and self-determination theory (for more detail see e.g., Davis, 2003; Wentzel, 2009). To provide an overview of different conceptualizations of teacher-student relationships, attachment, interaction, and motivation will be outlined as approaches to teacher-student relationships in the following.

An Attachment Perspective on Teacher-Student Relationships

Pianta and colleagues drew on attachment and developmental system theory to describe the teacher-child relationship (Pianta et al., 2003; Sabol & Pianta, 2012). They conceptualized teacher-student relationships in terms of adult-child relationships that are fundamental for children's development and share certain characteristics of parent-child relationships (Pianta, 1994, 1999b). As secondary caregiver, the teacher provides the child with security and emotional support, so that the child can explore its environment and engage in school (Hamre & Pianta, 2006; Verschueren & Koomen, 2012). The quality of the teacher-child relationship is linked to the teacher's sensitivity, which describes with how much warmth and care a teacher responds to the student's needs (Pianta et al., 2012; Rimm-Kaufman et al., 2003). Considering the child's school adjustment from a developmental system perspective, the teacher-child dyad is the most proximal system in school in which children develop and learn (Pianta, 2006; Pianta et al., 2003). Thus, the teacher-child relationship includes features of the teacher and the child, such as their perceptions of the relationship, the interaction processes through which teacher and child exchange information, and the external influences on their interactions exerted by the surrounding systems, such as the class, the school, and the broader social context (Hamre & Pianta, 2006; Pianta et al., 2003). To assess the teachers' perspectives on the quality of teacher-child relationships, the Student-Teacher-Relationship Scale has been developed (STRS; Pianta,

2001) and adapted to the students' perspective (Koomen & Jellesma, 2015; Milatz et al., 2014). Good teacher-student relationships are characterized by high levels of closeness and low levels of conflict. Closeness describes the degree of warmth and positive affect in the relationship, whereas conflict describes the degree of negativity and lack of rapport between teacher and child (Pianta, 1999b; Sabol & Pianta, 2012). The third dimension of the Student-Teacher-Relationship Scale, dependency, has been shown to be less relevant in secondary school (Koomen & Jellesma, 2015), to have questionable validity as relational dimension (Spilt et al., 2011), and has therefore been studied less intensely. Recent research using an attachment framework focused on an observational tool, the Classroom Assessment Scoring System, which measures teachers' emotional support, classroom organization, and instructional support, to assess the degree to which classroom interactions engage students in learning (CLASS; Allen et al., 2013; Hafen et al., 2014; Pianta et al., 2012).

An Interaction Perspective on Teacher-Student Relationships

Wubbels and colleagues drew on interpersonal and communication system theory to describe the interactions between teachers and students in the classroom (Wubbels & Brekelmans, 2005). Based on the Leary model of interpersonal behavior, they conceptualized teachers' interaction and communication behavior as being composed of two independent dimensions, originally labeled proximity and influence. Considering teaching as a form of communication, they assumed that students' perceptions of their teacher's behavior influences their own behavior and learning in the classroom (den Brok et al., 2004). As teacher and students continually exchange interpersonal messages, interaction patterns are established and form the relationships. To measure students' perceptions of the patterns of teacher's interpersonal behavior, the Questionnaire on Teacher Interaction has been developed (Wubbels & Levy, 1993)

and translated into several languages (Wubbels et al., 2012; Wubbels & Levy, 1991). Based on the Questionnaire on Teacher Interaction scale scores, different types of teachers' interpersonal styles could be distinguished and were linked to the classroom learning environment, for instance directive teachers treat students businesslike, are demanding, and create well-structured lessons (Wubbels et al., 2006). Good teacher-student relationships are characterized by high levels of communion and agency. Communion, also called affiliation or proximity, describes the behavior of someone who shows love, union, friendliness, and considerate behavior (Pennings et al., 2014; Wubbels et al., 2006). The second dimension, agency, also called control or influence, describes the degree of control or interpersonal influence someone exerts in an interaction (Mainhard et al., 2012; Wubbels et al., 2006). Recent research using an interpersonal approach focused on the connections between the moment-to-moment interactions between the teacher and the class (micro-level) and the relationship quality (macro-level), using a joystick observation tool to map teachers' and students' behavior in the classroom onto the two interpersonal dimensions (Mainhard et al., 2012; Pennings et al., 2014).

A Motivation Perspective on Teacher-Student Relationships

In line with the tenets of self-determination theory (Ryan & Deci, 2000), several researchers considered teacher-student relationships as fulfilling students' basic need for relatedness and thus, promoting students' engagement (e.g., Bieg et al., 2011; Skinner et al., 2008). In self-determination theory, Deci and Ryan argue that the needs for autonomy, competence, and relatedness are three innate psychological needs that are basic to humans' intrinsic motivation, growth, and wellbeing (Ryan & Deci, 2000). Within the context of teacher-student relationships, the need for relatedness is the relevant dimension. The need for relatedness, also called the need to belong, describes the desire to form and maintain positive and

personal relationships, in which people feel a strong connection with and care for each other (Baumeister & Leary, 1995; Ryan & Powelson, 1991). Social contexts that satisfy the need for relatedness are characterized by involvement and warmth, whereas social contexts that thwart the feeling of relatedness are characterized by neglect (Skinner & Belmont, 1993; Skinner & Wellborn, 1997). Students' sense of relatedness is a key self-system process that links students' perceptions of the social context to their sense of self and actions and fosters students' engagement leading to academic achievements (Connell & Wellborn, 1991; Furrer & Skinner, 2003). Teachers can nurture students' sense of belonging and mutual connection by the way they provide emotional support for, show interest in, and spend time with their students. Thus, by establishing caring relationships with their students, teachers foster students' engaged behavior in school (Bieg et al., 2011). To assess a teacher's provision of involvement, structure, and autonomy support as perceived by the teacher or the students, the Teacher as Social Context Questionnaire has been developed (TASQ, Skinner et al., 2008) and was recently translated into Spanish (Iglesias-García et al., 2019). Teachers who show a high degree of involvement to satisfy their students' need for relatedness rate themselves and are rated high by their students on affection, dedication of resources, attunement, and dependability (Iglesias-García et al., 2019). Recent research focused on teachers' behavior regarding autonomy support and structure to support students' engagement in the classroom (Aelterman et al., 2019), disregarding involvement and thereby students' need for relatedness.

Even though models and instruments to investigate teacher-student relationships differ widely, the unifying conclusion of these studies is that teacher-student relationships impact students' social, affective, and cognitive outcomes. First meta-analyses summarized the findings of this vast body of research and showed that positive teacher-student relationships were

positively associated with an array of positive student outcomes, such as participation, critical thinking, math and verbal achievement (Cornelius-White, 2007), that negative teacher-student relationships were negatively associated with student engagement and achievement, whereby engagement partially mediated the link between relationship quality and achievement (Roorda et al., 2017; Roorda et al., 2011), and that teacher-student relationships affect different types of student engagement, such as grades, school attendance, and dropout (Quin, 2017). Furthermore, researchers concluded that high-quality teacher-student relationships are important for students' school adjustment from kindergarten to secondary school and have a protective effect for students at-risk (Hughes, 2012; Sabol & Pianta, 2012; Wentzel, 2012). High quality teacher-student relationships can be described as "warm and close" from an attachment perspective, as involving "understanding and friendly" behavior from an interaction perspective, and as promoting feelings of being "connected and involved" from a motivation perspective.

Within the literature investigating the quality of teacher-student relationships, good relationships are also referred to as caring relationships, that is teachers show that they care about their students in their relationships. Several instruments assessing teacher-student relationship via students' self-reports used an item that tapped into students' perceptions of teacher care (e.g., "the teacher cares about me" (Hughes et al., 2008; Johnson et al., 1985; Malecki & Demaray, 2002; She & Fisher, 2000). These references point in the direction that teacher care is a construct that is closely related to teacher-student relationships and therefore, investigating care may help to gain a more holistic understanding of teacher-student relationships and teachers' contribution to these relationships.

Teacher Care

Researchers who focus on the pedagogical aspect of teaching stress that caring is an inherent part of teaching and that good and effective teachers care about their students (e.g., Goldstein & Freedman, 2003; Rogers & Webb, 1991). This line of research originates from Noddings' (1984) work about the ethic of care and claims that teachers have a moral responsibility to care, that is to establish meaningful relationships with their students. Caring means to be affectively moved by the need of the other and to intellectually understand the need of the other (Noddings, 2012). In a caring relationship, the teacher responds sensitively to the needs of the student in a way that the student acknowledges the teacher's caring (Noddings, 2012). Thus, caring is not an individual's trait or intention, but the act of creating caring encounters in which the one caring (teacher) responds to the cared-for (student). In the classroom, a caring encounter is initiated by the teacher who is open and attentive to the needs of a student and is completed when the student receives the teacher's caring response. For example, a teacher may recognize that a student needs help to fulfill an assignment. The caring response could be to acknowledge the student's struggle ("I see you can't really focus right now"), to encourage the student ("It's a challenge you can accomplish"), to propose an action ("When you read the instructions, you'll know where to start"), to simply nod at the student or to offer the student a break (e.g., if the student has a hard time at school/at home). Therefore, the caring response clearly depends on the underlying need of the student and the insights of the teacher.

Furthermore, caring relations teach students to care not only in a relational sense (i.e., for others), but also to engage in further forms of caring, for instance caring for subjects or ideas (Noddings, 2005). In line with this, researchers investigating what caring means to students and teachers concluded that a caring teacher not only builds rapport with students, but also cares

about teaching and learning (Goldstein, 1999; Rogers & Webb, 1991; Weinstein, 1998; Wentzel, 1997). Analyzing student teachers' ideas about caring and order, Weinstein (1998) advocated a broader definition of caring that includes creating an orderly and productive learning environment because most of the interviewed student teachers described a dichotomy between caring in terms of establishing good relationships and order in terms of management strategies (Weinstein, 1998). Caring in a purely relational sense was associated with nurturing, showing warmth and affection, listening, building rapport, and being accessible. Order referred to establishing rules, managing misbehavior, representing an authority, and engaging students in the lesson. Analyzing students' perceptions of caring and supportive teachers, Wentzel (1997) drew on Noddings' work and family socialization literature to define five components of pedagogical caring that included aspects of caring and order: modeling caring behavior, democratic communication styles, expectations for behavior, rule setting, and nurturance (Wentzel, 1997). Students' descriptions of caring teachers referred to teachers who cared about teaching, engaged in open dialogue with students, recognized students' skills and problems, treated students fairly and with respect, and gave constructive feedback. Bringing together Vygotsky's theory of cognitive development and Noddings' conception of care, Goldstein (1999) described the zone of proximal development as a caring encounter in which teacher and student co-construct knowledge and negotiate meaning. Thus, caring relationships between teacher and student are fundamental to the teaching-learning process and contribute to children's intellectual growth. Summarizing the findings of the Caring Study, Rogers and Webb (1991) also stressed the link between caring and educational decision making: based on teachers' and students' descriptions of good teachers, they conceptualized caring in terms of considering students' personal and

educational needs, adapting academic actions accordingly, and creating a safe and encouraging environment for learning and development.

Taken together, research about caring teachers underlines the link between positive teacher-student relationships and well-organized lessons. To promote students' learning, teachers should establish caring relationships with their students by showing warmth, concern, and acceptance towards students on the one hand, and by maintaining an orderly and structured learning environment on the other, which is in line with recent research on classroom management (Nie & Lau, 2009). By combining care and behavioral control, teachers provide not only structure, rules, and expectations, but also nurturance and warmth, which can be compared to effective parenting strategies (Wentzel, 2002). Caring teachers are typically capable of creating an atmosphere of respect and trust in which students feel cared for, are motivated to comply with social rules, and engage in learning.

Going beyond the relevance of teacher care for students, the German research tradition has discussed the importance of teacher-student relationships and the meaning of care ("Fürsorge") for teachers' professional competence and the teaching profession. The points of view are controversial (Baumert & Kunter, 2006; Helsper, 2007): On the one hand, the competence-oriented approach understands teacher-student relationships as matter-of-fact, universalistic role-relationships and defines outcome-oriented standards for teachers' professional competences. On the other hand, the structural theory approach understands the teacher-student relationship as pedagogical working alliance that is characterized by antinomies (tensions) such as closeness vs. distance. Hence, the teacher-student relationship underlines the structural uncertainty of teachers' professional actions because teaching takes place in social interactions with students and its outcome is therefore never guaranteed. This discussion

exemplifies the broad spectrum of differing conceptualizations of teachers' educational mission and the consequential understanding of teacher-student relationships. Some exemplary overviews of the different pedagogical models of the teacher-student relationship (Diers, 2016; Knierim et al., 2017; Thies, 2017) and different conceptualizations from educational and sociological perspectives (Helsper & Hummrich, 2014) are available.

To summarize, research underlines the importance of caring relationships for good teaching, caring teachers are likely to create good relationships with students, to motivate them, and to teach successfully. The importance of caring is also supported by research on teachers' achievement goals, which showed that teachers aim to create close and caring relationships with students (Butler, 2012; Butler & Shibaz, 2014). Furthermore, teachers not only feel responsible for the quality of their relationships with students, but their interaction with students can be a source of personal and professional fulfillment or failure (Nias, 1996, 1997). Thus, teacher-student relationships are important for teachers personally and professionally (Spilt et al., 2011). Paying attention to the professional dimension, investigating teachers' professional identity may lead to new insights into the beliefs teachers hold about their roles and responsibilities as professionals in the classroom and the meaning of teacher-student relationships for teaching.

Teachers' Professional Identity

The construct of teacher identity helps to understand teachers' actions and emotional experiences during their interactions with students (Schutz et al., 2007). Teacher identity encompasses teachers' beliefs about teaching, their teacher roles, and role identity. Working in the teaching profession, teachers occupy a social position and construct a social role identity that guides their decision making about actions they take in their role as teacher (Kaplan & Garner, 2017). Teachers' professional role identities are based on teachers' assumptions about what it

means to be a teacher and their interpretations of the different roles teachers should enact inside and outside the classroom (Farrell, 2011). How teachers construct their professional identity is an ongoing, dynamic process that is influenced by many external factors, such as socialization, teacher education, and their interaction with others in the professional context (Beauchamp & Thomas, 2009). Thus, to develop and maintain a professional identity, teachers must reconcile their personal understanding of their teaching roles with the professional demands, social expectations, and standards that arise in the context of schools (Beijaard et al., 2004). Based on the broadly accepted ideas about what a teacher should know and do, Beijaard and colleagues identified three expert roles that constitute teachers' professional identities: subject matter expert, pedagogical expert, and didactical expert (Beijaard et al., 2000). Teachers understand their own professional identity as combination of these expert roles by differently weighing the relevance of each role for their teaching. Those teachers regarding themselves as pedagogical experts stress the importance of teacher-student relationships and teachers' involvement, interaction, and engagement with students for students' learning and view it as integral part of the teaching profession. The relational aspect of the teaching profession seems to be a relevant aspect of teachers' professional identities, especially for preservice and beginning teachers. Investigating beginning teachers' professional identities, Pillen and colleagues found that beginning teachers experienced tensions between the professional demands of their teaching role and their personal desire as teacher to interact with student and to care for them (Pillen et al., 2013). Furthermore, several studies using metaphors to evoke teachers' implicit and explicit beliefs about their professional roles (Tobin, 1990), identified certain teacher roles (e.g., caregiver, parent, friend) that underline the importance of teacher-student relationships for teachers' identities. More specifically, Löfström and colleagues found that student teachers most often used a pedagogical

metaphor (i.e., mother or parent) to describe the teacher as a person who cares for their students before being a subject matter or didactic expert (Löfström et al., 2010). Moreover, Saban and colleagues categorized the collected metaphors into six dominant themes of which two themes described the teacher as being concerned about students' wellbeing in terms of a nurturer/cultivator or counselor (Saban et al., 2007). Investigating student teachers' metaphors in their first year of teaching, Thomas and Beauchamp found that the largest part of metaphors right after graduation centered around the idea of supporting students showing that the early teacher identity is directly linked to the ways teachers want to interact with their students (Thomas & Beauchamp, 2011). Comparing experienced vocational teachers' metaphorical images for their profession, Ben-Peretz and colleagues found that teachers of low-achieving students chose a caring metaphor more often than teachers of high-achieving students, and the latter conceptualized caring rather in terms of promoting students' academic growth than solving social problems (Ben-Peretz et al., 2003). Analyzing the shared ideas of their professional roles that experienced language teachers discussed in group meetings, Farrell identified three main role identities (manager, acculturator, and professional), of which acculturator described a teacher who engages with students and helps them outside class (Farrell, 2011).

Overall, the interpersonal aspect of teaching in terms of creating and maintaining relationships with students, seems to be an important part of teachers' professional identities. Recent research focused on the aspect of teachers' professional identities that specifically refers to the teacher-student relationship, calling it the interpersonal role identity of teachers (van der Want et al., 2015). According to their findings, teachers want to meet the interpersonal identity standard of being friendly towards students and leading them, which are both behavioral patterns

that are high in communion (van der Want et al., 2015). Even though the emotional and caring nature of teaching is often neglected in research, caring for students is part of teachers' professional and personal identity. Teachers' caring behavior can take different forms and serve different purposes, such as achieving a pedagogical goal (e.g., motivating students), maintaining a professional role (e.g., interacting with students in a supportive manner), and making the personal choice to care (e.g., committing to one's own code of ethics; (O'Connor, 2008). To build a professional identity, teachers have to incorporate different teacher roles in their self-image as teacher and ponder the importance of building relationships with students as their personal and professional goal (Butler, 2012). Thus, the quality of teacher-student relationships can correspond or discord with the internal standards of teachers' role identities.

Critical Appraisal of Research and Identification of the Research Gap

So far, research has looked at teacher-student relationships with a focus on their effects on students, that is, researchers have investigated teachers' beliefs, attitudes, and behaviors that influence their relationships with students in order to promote students' learning. The focus was placed on increasing teachers' abilities to establish positive teacher-student relationships, to create a caring environment, and to develop a professional identity that will improve students' school adjustment (e.g., Hughes, 2012; Noddings, 2005; Sachs, 2005). This idea of the teacher being the responsible person to create and initiate relationships with students is one-sided and pivots around the educational outcome of schools, namely students' academic achievement. Missing from this picture, however, is the teachers' side of teacher-student relationships, more specifically two important relational aspects. First, teacher-student relationships are reciprocal and negotiated between teachers and students. Students influence and actively co-create the

quality of these relationships and evoke different teacher behavior in the interaction (Nurmi, 2012; Nurmi & Kiuru, 2015). Even though teacher-student relationships are asymmetric (i.e., teachers have more power, responsibility, and experience), teachers depend on students' responses regarding their efforts to develop caring relationships and a professional identity (Noddings, 2012; Riley, 2009). Second, interactions with students are the basis of teachers' day-to-day teaching experiences and teachers' engagement and wellbeing. Therefore, teaching experiences and student outcomes should be equally important for any school's agenda. Teachers have a need for relatedness with their students and thus, the quality of their teacher-student relationships affects their wellbeing (Klassen et al., 2012; Spilt et al., 2011). With school being teachers' workplace, teachers' engagement and intrinsic motivation are affected by the satisfaction of their own basic need of relatedness (Connell & Wellborn, 1991; van den Broeck et al., 2016). Even though teachers interact with colleagues, parents, and the organizational staff at school, their relationships with students are especially important to them as they spend most of their time in class (van Droogenbroeck et al., 2014). Recent studies showed that the link between teachers' relatedness and their emotions and motivation is stronger for feeling related with students than for feeling related with colleagues (Aldrup et al., 2017; Collie et al., 2016; Klassen et al., 2012). Additionally, satisfaction of the need for relatedness with students is associated with flow tendencies (Evelein et al., 2008).

Even though first findings underlined the effect of teacher-student relationships on teachers' emotional wellbeing (Aldrup et al., 2018b; Taxer et al., 2019), further research is needed to understand the teachers' relational experience with the students of a classroom. So far, these studies based their theoretical frameworks and instruments on the current conceptualization of the teacher-student relationship as dyadic phenomenon, that is a relationship between one

teacher and one student. But taking the teachers' perspective, the class is the point of reference that structures teachers' daily work and teaching experiences, whereas the interaction with individual students is subordinated to the interaction with the class. Thus, teacher-student interactions in the classroom not only involve one teacher and single students, but one teacher and a whole class (i.e., fixed group of students), so that the class can be viewed as relationship partner of the teacher. To capture teachers' relational experiences with the classes they teach, it is necessary to develop a new concept that defines the relationship between one teacher and a whole class, henceforth called *teacher-class relationship*. To this end, the present thesis covers an introduction and definition of the construct of the teacher-class relationship by transferring common dimensions and characteristics of dyadic teacher-student relationships to this individual-group phenomenon. Furthermore, it covers students' relational behavior towards the teacher and how it influences the teacher-class relationship, teachers' perceptions of their teacher-class relationships, and links with relevant teacher variables (e.g., teacher emotions, burnout) and teaching-related concepts (e.g., self-efficacy, teacher identity).

Two studies were conducted to answer two overarching research questions addressing the lack of research on teachers' relational experiences with their classes. The first research question was how teacher-class relationships can be measured and the second was how teacher-class relationships can be conceptualized. To answer the first research question, Study 1 used a mixed-methods approach by combining interview with questionnaire data to validate a newly constructed instrument to measure the teacher-class relationship (TCR) from the teachers' perspective (henceforth, TCR scale). To answer the second question, Study 2 used a grounded theory approach to analyze a subset of interviews to develop a conceptual framework for teacher-class relationships based on teachers' everyday experiences with their classes.

Methodological Choices

In the mixed-method study, cognitive interviews with teachers were conducted in which the teachers answered the newly constructed items of the TCR scale. For each item, teachers were prompted to describe the cognitive steps of their item answering process separately (i.e., general item understanding, information retrieved from memory to answer the item, and evaluation of the scale to rate the item). To determine the degree to which each item fit in the definition of the teacher-class relationship construct, the teachers' verbal descriptions had to be transformed into countable segments and codes. Thus, it was crucial to define a stringent coding unit and coding rule to obtain coherent results. In the qualitative study, an in-depth analysis of an interview subsample was conducted using a grounded theory approach. By assuming that knowledge is individually constructed, the constructivist version of grounded theory was chosen. Developing a conceptual understanding of the teachers' lived every-day experience with their classes, the researcher takes an active and constructing role in engaging with the interview data. Thus, it is imperative that researchers reflect on their own research position before and during the whole analytical process to subtract their personal ideas from the data-based findings.

Coding Unit in Qualitative Content Analysis

Coding took place in two stages applying the systematic procedure of qualitative content analysis (Mayring, 2014). In the first stage, the interviews were coded inductively to develop data-driven categories and a coding scheme. In the second stage, the interviews were deductively coded using the developed coding scheme to calculate code frequencies. Before inductive coding started, the coding unit and the level of abstraction of the categories were defined to obtain suitable codes matching the specific research questions of the first study (i.e., "Which aspects do teachers associate with the teacher-class relationship?" and "Do teachers refer to the class or to

students when describing the teacher-class relationship?"). For the categories representing aspects of the teacher-class relationship (i.e., thematic codes), the coding unit was defined as "any meaningful statement that describes a specific aspect related to the teacher-class relationship" (e.g., classroom atmosphere, greeting manners, topics of conversation). Statements could comprise a few words, a sentence, or a paragraph to ensure a fine-grained and comprehensive representation of teachers' answers. The level of abstraction of the thematic codes was defined as "transferability of the described aspect to any other teacher-class constellation" (e.g., the extent to which students share personal matters with the teacher can be assessed in different classes) to ensure that the codes were applicable across all interviews. Additionally, each category had to be straightforward and detailed enough to be clearly separable from the other categories. For the categories representing the point of reference of the teachers' statements (i.e., conceptual codes), the codes were predefined as the mutually exclusive categories "class as entity" and "individual students". Focusing on teachers' references to individual students, the coding unit was defined as "any segment from mentioning individual students until the class or all the students of the class are referred to again".

Before deductive coding started, the teachers' verbalized thought processes of answering the items were divided into the paragraphs of the standardized interview protocol. This segmentation resulted in three paragraphs per item (i.e., one paragraph per cognitive step). The coding rule for the thematic codes was defined as "occurrence of any thematic code within a paragraph" (i.e., *yes*/*no* statement per paragraph for each thematic code). Following this coding rule, each item was systematically analyzed by identifying which different aspects of the teacher-class relationship teachers associated with it. The coding rule for the conceptual codes "individual students" and "class as entity" were defined as "occurrence of any 'individual

students' code within a paragraph" or "occurrence of any 'class as entity' code within a paragraph", respectively (i.e., *yes*/*no* statement per paragraph for the "individual students"/"class as entity" code). Applying this strict coding rule, it was ensured for each item that teachers clearly referred to the class when answering the item. Interviews were coded in two independent rounds by four coders who each coded half of the randomly assigned interviews. In line with the coding rules, coder agreement occurred when both coders coded the same paragraph with the same thematic and conceptual code (i.e., agreement of *yes*/*no* statements). Interrater reliability and code frequencies were calculated. For the presentation of the study's findings, subcodes of the thematic codes were subsumed and the three item paragraphs were merged into one paragraph per item to provide a comprehensible overview over the items' main codes. Therefore, the occurrence of each thematic code was counted only once within the three item paragraphs and the conceptual code "class as entity" was only assigned when each item paragraph was coded with this code. Even though this summary changed the total number of codes per item, both calculations of code frequencies resulted in the same items to be cognitively valid regarding their ratio of thematic and conceptual codes.

Research Position in Grounded Theory

Applying the principles of grounded theory, reflexivity is an important strategy to ensure the quality of research in that researchers acknowledge how they influence the analytical process. Researches should make these influences explicit (to themselves and the reader) by reflecting on their personal research position, their beliefs, and worldviews because such factors will guide how researchers approach, analyze, and conceptualize the research topic (Schutz, 2014). Thus, it is necessary that researchers are transparent about their assumptions when starting a research project and reflect on their ideas (and maybe taken for granted meanings) about the nature of

knowledge/reality, their relationship with participants, and their personal history (Birks & Mills, 2015). In the following I describe my personal research position with respect to different aspects relevant to the present thesis.

Gaining Knowledge About the "Real" World. There is no objective truth or reality because people construct their own, subjective reality and knowledge. Individuals' ideas about the world are influenced by their previous experiences and how they make meaning of these experiences against their socio-cultural background. Despite the differences between individuals, psychological researchers assume that there are similarities between people regarding basic psychological processes, for instance people share the same basic needs (e.g., Maslow), the same basic emotions (e.g., Eckman), and the same mental processes responsible for learning (e.g., Piaget). As researchers in the field of psychology, we strive to generalize and find patterns in the experiences of individuals so that we can explain and predict human behavior. Thus, we are able to reach a necessary ground of understanding (each other) and can describe a "common truth/reality" in terms of the intersection of similar experiences. Researchers cannot claim the "universal truth", but they can find explanations for clearly defined, real-world problems and social phenomena within a specific context. Therefore, we can get to the essence of social and psychological phenomena by abstracting the commonality and the universal meaning of the lived experience.

Relationship Between Researcher and Participant. How researchers build rapport with their study participants especially in interviews is influenced by their idea of humankind and their philosophical approach. From a humanistic worldview, people have the potential and ability to grow, they strive to develop their full self, and they can overcome problems and conflicts by solving incongruences between the self and the lived experience. From a phenomenological

standpoint, the focus lies on the experience itself and the meaning of the lived experience to the person. Integrating both perspectives, researchers should step back in the interaction with the participants and push their own experiences and assumptions to the side. Researchers should give the stage to the participants who have first-hand knowledge of the phenomenon; they should explore the participants' experiences and their meaning-making openly and curiously. Thus, the researchers' relationships with the participants are characterized by their appreciation of the participants, their knowledge and experience, and their willingness to learn from the participants. The researchers' tasks are to organize the setting, give direction and structure, and apply their scientific reasoning and analytical eye to abstract and condense the participants' experiences.

Influences of Personal History and Educational Background. I was taught in the German educational system to become a secondary school teacher in mathematics and school psychology. During my studies, even though my teacher training focused on subject matter and didactics, I was very interested in emotions and how they influence communication and interaction between people. Due to the limited practical experience in university, I started a training in Gestalt therapy that fueled my interest in good and authentic contacts and relationships between people. After graduation, I stayed in the university to further explore teachers' emotional lives and their relationships with their classes, which represents the crossing point of my Gestalt therapy and teacher training. Drawing from my mathematical background, I understand my task as researcher to abstract "the common" from "the individual" which is like drawing a regression line representing all the individual data points of a sample.

In general, several assumptions about the relational phenomenon between teacher and class guided the research project. i) There is a relationship between a teacher and a class; the class as entity is not only a point of reference, but also a relationship partner for teachers, ii)

teaching is different in different classes and similarly, every teacher-class relationship is unique, influenced by the characteristics of the class and the teacher, iii) teachers have an intuitive understanding of the relationship concept and perceive the class spontaneously as an entity by aggregating their perceptions of the individual students, iv) teachers have the necessary skills and insights to build fruitful relationships with students, but sometimes these resources are not (consciously) available to them.

2. Study 1

The Teacher-Class Relationship: A Mixed-Methods Approach to Validating a New Scale

"Basically, I think that a good relationship with a class you are teaching is very important – only then, learning happens." Statement of a secondary school teacher.

Teacher-student relationships have been studied from multiple theoretical viewpoints, including attachment theory, self-determination theory, interpersonal theory, and theories explaining social-motivational processes (Sabol & Pianta, 2012; Skinner et al., 2008; Wentzel et al., 2010; Wubbels & Brekelmans, 2005). The last decade has brought forward cumulative evidence that teacher-student relationships have a substantial influence on key academic outcomes – specifically student motivation and performance in school (Hughes & Cao, 2018; Martin & Collie, 2018; Nurmi, 2012; Quin, 2017; Roorda et al., 2017; Roorda et al., 2011). Recent research also takes the teacher into account, with results indicating that the quality of teacher-student relationships is essential for teachers' wellbeing and accomplishments (Aldrup et al., 2018b; Hagenauer et al., 2015; Hargreaves, 2000; Klassen et al., 2012; O'Connor, 2008). The present contribution focuses on teachers' perspectives and presents a newly developed self-report scale for the assessment of teacher relationships with their classes, from the teachers' point of view. In the first (qualitative) study, we applied cognitive validation interview techniques (e.g.,

Karabenick et al., 2007; Willis, 2015), and in the second (quantitative) study, we tested the psychometric quality of the newly developed scale. We propose that the findings will expand the scientific understanding of the phenomenon, and the existence of a validated scale with a clear-cut, concise definition of teacher-class relationships will help advance research on teacher wellbeing and accomplishments, but also instructional quality and general classroom functioning.

Assessing Teacher-Student Relationships

The assessment of teacher-student relationships through self-report can be approached from different perspectives. First of all, instruments can use either students or teachers as source of information. Second, instruments differ in that they either measure the relationship (a) between a single teacher and an individual student (i.e., they treat the phenomenon of relationship as a dyadic relationship between two individuals), or (b) between the collective of teachers and students at a school (i.e., they conceptualize relationship quality as a collective, school-wide phenomenon) or (c) between a teacher and the entire group of students within one class (i.e., they conceptualize the relationship as phenomenon between an individual and a group). A prominent and widely used example for (a) is Pianta et al.'s Student-Teacher Relationship Scale (2001), which describes relationship quality as a dyadic phenomenon between two individuals from the teachers' perspective. Hannover and colleagues(in press) proposed a new instrument that also focuses on the dyadic interaction between teachers and students from the teacher perspective. Examples for reports about the dyadic relationship quality from the students' perspective are Koomen et al.'s Student Perception of Affective Relationship with Teacher Scale (2015) and Davis's Quality of the Student/Teacher Relationship Scale (2001). Examples for (b), that is judgments of the overall quality of relationships between teachers and

students in general as reported by both teachers and students, can be found in research on classroom climate and social support (e.g., Collie et al., 2012; Eder & Mayr, 2000; Hertel et al., 2014; Mang et al., 2018; Rauer & Schuck, 2003; Zullig et al., 2010). Examples for (c) are Wubbels et al.'s Questionnaire on Teacher Interaction (Wubbels & Levy, 1993) and Saldern and Littig's Teachers' Care Subscale (Bieg et al., 2011), which describes the teacher's relationship with a group of students from the students' perspective . The large majority of these instruments is widely used and well established, and research considering teacher-student relationships is predominantly driven by dyadic conceptualizations of relationships in the classroom.

In contrast, we identified a conspicuous lack of research, and corresponding instruments, which conceptualizes relationships as an individual-group phenomenon from the teachers' perspective. We label this concept *teacher-class-relationship* and thus, address the relationship quality between a teacher and their class (i.e., the entire group of students) as reported by the teacher. We argue that teachers, specifically in the secondary school context, mostly interact with the whole class during teaching and the interaction with individual students is limited due to the large number of classes and students they teach. Given the importance of teacher-student relationships for secondary school students in conjunction with the decline of their quality (Eccles et al., 1993; Maulana et al., 2013), it seems important to investigate different perspectives on these relationships to better understand and improve them. Prior theoretical models of teacher-student relationships also suggest that teachers build relationships with classes that are different from their relationships with the individual students (Wubbels et al., 2014), that teachers form mental representations of relationships on the individual and the classroom level (Spilt et al., 2011), and that the whole class can become an attachment object (Riley, 2011). There are scattered studies that used instruments that come conceptually close to this idea

because teachers reported about their relational behavior and/or relationship quality with the students of a class (Aldrup et al., 2018b; Baumert et al., 2009; Hagenauer et al., 2015; Klassen et al., 2012). These studies unanimously emphasize the importance of such teacher-reported teacher-class relationships. Also, there is empirical evidence that the class as point of reference plays an important role for teachers because it has been shown that teachers' emotional experience during teaching varies systematically between classes (Frenzel et al., 2015; Kunter et al., 2011). Existing studies, however, that focused on teachers' relationships with a class used self-developed scales without documented validity. Specifically, evidence is lacking whether those instruments measure mentally-represented relationship quality between teachers and their class validly and reliably.

Overall, we concluded that a comprehensive and validated instrument that specifically addresses the teacher-class relationship would be a valuable contribution to the field. In creating and validating the instrument, our key goal was to assure that when teachers respond to the newly developed items, they indeed think about the entire class rather than about individual students. To this end, we selected a set of established items from existing instruments on teacher-student relationships and reformulated them to target the whole class. Next, we used cognitive interviewing techniques to validate the items. Cognitive validation implies asking participants to verbalize (a) how they comprehend an item, (b) which corresponding information they retrieve from memory when answering it, and (c) to explain why they select a certain response (e.g., Karabenick et al., 2007; Willis, 2015). By systematically prompting these steps of item response, items can be scrutinized for a sufficient match between participants' and researchers' conceptualization of the targeted constructs. For the present purpose, we used this method to

verify that teachers referred predominantly to the whole class and to our conceptualization of the teacher-class relationship when answering the items of the new instrument.

Conceptualizing the Teacher-Class Relationship

We define the construct of the teacher-class relationship as the relationship between a teacher and the whole class as relationship partner who both shape interactions. In this definition, we apply the concept relationship to describe the dynamic interplay between the interacting parties, their interaction patterns, and contextual influences (e.g., Pianta et al., 2003; Wubbels et al., 2014). Focusing on teachers, we are interested in the teachers' mental representations of the interaction patterns with the class as an entity. Thus, we explore teachers' perceptions and interpretations of the interpersonal transactions with the class in terms of cognitive judgments about how well they connect and relate with the students of the class. In so doing, we also integrate the concept of relatedness as proposed within self-determination theory (e.g., Connell & Wellborn, 1991; Furrer & Skinner, 2003), and suggest that teachers have a need for, and a sense of, relatedness or belonging with their classes.

Furthermore, in line with an attachment-theoretical perspective, we conceptualize positive teacher-class relationships not only as showing high levels of closeness, but also low levels of conflict, with closeness describing the degree of warmth and positive affect in the relationship and conflict describing the degree of negativity and lack of rapport between teacher and students (Koomen & Jellesma, 2015; Sabol & Pianta, 2012; Verschueren & Koomen, 2012). We chose to integrate these three themes in our definition of the teacher-class relationship as they are most predominant in the literature. Furthermore, these themes manifest conceptual proximity and overlap with other concepts used to measure teacher-student relationships, for instance closeness with affection/attunement, warmth/intimacy, and communion (Hughes et al.,

2008; Skinner et al., 2008; Wubbels et al., 2014), conflict with dissatisfaction, alienation, and negativity (Brinkworth et al., 2017; Murray & Greenberg, 2001; Murray & Zvoch, 2011), and relatedness as being linked to several cognitive processes which shape motivation through interaction with significant others (Martin & Dowson, 2009).

We placed great emphasis on differentiating the teacher-class relationship from related, yet different concepts of teachers' experiences, notably teachers' social and interpersonal behaviors, self-efficacy and emotions. As such, we focus on teachers' mental representations of the quality of their relationship with the class, and exclude teacher behaviors such as academic help or instructional support (Hagenauer et al., 2015; Roorda et al., 2017). Thus, we set our concept apart from teachers' behavioral efforts to establish positive relationships with their students to fulfill their need of relatedness and from their interpersonal behavior in the classroom as part of their instructional strategies (Baumert et al., 2009; Klassen et al., 2012). Instead of focusing on teachers' interpersonal behavior, the teacher-class relationship explicitly encompasses teachers' interpretation of how the students of the class interact with them and shape the relationship.

We acknowledge that social relationships and emotions are conceptually intertwined as relationships are assumed to be a core source of emotions (Frijda & Mesquita, 1994; Schutz, 2014) and experiences of belonging, or lack thereof, evoke strong emotional responses (Baumeister & Leary, 1995). Furthermore, relationships with students can be challenging for teachers because they require them to mask and manage their emotions (Chang, 2009; Hargreaves, 2000). However, we make a clear distinction between the affective experiences during interactions and the cognitive evaluation of the relationship quality as stored in the mental representational model of the relationship. Mental representations of relationships consist of the

generalized perceptions of and the stored information about the ongoing interpersonal relationship (e.g., Pianta et al., 2003; Ryan et al., 1994), and thus, are distinct from the emotional response during the actual interaction (Spilt et al., 2011).

In addition, we also differentiate the mental representation of the relationship quality from teachers' beliefs about their teaching efficacy to discern their perception of good relationships with students from their success at delivering high-quality instruction in terms of positively influencing student engagement, successful classroom management, and effective instructional strategies. In sum, we consider teachers' supportive behaviors, their emotions, and self-efficacy as conceptually distinct concepts that are important correlates of the teacher-class relationship, but not core components of the relationship quality.

This conceptualization of the teacher-class relationship guided our item selection from the list of existing items on teacher-student relationships. Additionally, in our cognitive interviews to validate the items, we based our judgment of whether there was a sufficient match between participants' and our scientific understanding of the teacher-class relationship on this conceptualization.

The Present Research

The present research sought to explore whether and how the *teacher-class relationship* can be operationalized, and whether it can be validly measured with our newly developed set of self-report items. To validate this new set of TCR items, we designed a mixed-methods, two-study approach to combine different validation procedures. In Study 1.1, we used qualitative cognitive validation techniques to explore to what extent the proposed items reflected the main theoretically assumed aspects of relationship quality, and to what degree they were suitable to capture the specific idea of the teacher-group perspective of our instrument. In Study 1.2, we

applied quantitative validation techniques to explore the psychometric quality of our newly developed TCR scale. This combination of qualitative and quantitative data allowed us to gain deeper insights into teachers' understandings of the items and their response patterns. By applying cognitive validation interview techniques, we are able to detect possibly misleading items on a granular level and then use a subset of items in a questionnaire survey to draw conclusions on a more generalizable level. By integrating findings across the qualitative and the quantitative validation process, we are able to present a final teacher-class relationship scale that comprises the most suitable items to measure teacher-class relationships.

Study 1.1

The aim of this qualitative study was to verify that teachers have an intuitive understanding of the teacher-class relationship when answering the TCR items as interview questions. Therefore, in a first step, we identified the main topics that teachers associated with the TCR items using an inductive coding procedure. In a second step, we used a deductive coding procedure to select the most suitable items based on their code frequencies. We assessed the suitability of each item through the frequency of coded statements with regard to (a) the main aspects of relationship quality and (b) the representation of the class as a group.

Item Selection and Formulation Process

We conducted a comprehensive literature review of the topic of teacher-student relationships and retrieved existing instruments and their items to establish a well-grounded baseline for item selection.

Search terms for our literature search were "teacher", "student", "child" and "relationship" in PsycInfo and PSYNDEX. We extracted all articles that reported instruments targeting teacher-student relationships and relational behaviors, conceptualized as a dyadic or

collective phenomenon, and assessed it from the students' or the teachers' perspective. Cross-references were checked for further instruments and, if necessary, authors were asked for the full number of items if only a partial representation was included. Overall, we identified 36 scales from different research perspectives, with scales comprising between 6 and 28 items (see Table 1.1 for details).

Table 1.1

Instruments Targeting Teacher-Student Relationships or Relational Behaviors

Teachers' Perspective		
Dyadic	**Collective**	**Class**
(Ang, 2005) [a]	Collie et al. (2012) [a]	Aldrup et al. (2018b)
Brinkworth et al. (2017) [a]	Hertel et al. (2014)	Baumert et al. (2009)
Hannover et al. (in press) [a]	Mang et al. (2018)	Hagenauer et al. (2015)
Hughes et al. (1999) [a]		Klassen et al. (2012)
Hughes et al. (2008) [a]		Roza et al. (Study 1) [a]
(Milatz et al., 2014) [a]		
Pianta (2001) [a]		
Skinner et al. (2008) [a]		
Students' Perspective		
Dyadic	**Collective**	**Class**
Blankemeyer et al. (2002) [a]	Crosnoe et al. (2004)	Bieg et al. (2011) [a]
Brinkworth et al. (2017) [a]	Eder and Mayr (2000) [a]	Feldlaufer et al. (1988) [a]
Davis (2001) [a]	Gregory and Weinstein	Mang et al. (2019)
Furrer and Skinner (2003)	(2004) [a]	Trickett and Moos (1974) [a]
Hughes et al. (2008) [a]	Mang et al. (2018)	Wubbels and Levy (1993) [a]
Johnson et al. (1985) [a]	Malecki and Demaray	
Koomen and Jellesma (2015) [a]	(2002) [a]	
Murray and Zvoch (2011) [a]	Murray and Greenberg	
Ryan et al. (1994) [a]	(2001) [a]	
Skinner et al. (2008) [a]	Rauer and Schuck (2003) [a]	
Weinstein et al. (1982) [a]	Zullig et al. (2010) [a]	

Note. [a] Validated scale (i.e., extended information about reliability and validity available).

In line with our conceptualization of the teacher-class relationship detailed above, we applied the following guiding principles for item inclusion: the items should not explicitly describe any emotional experiences (e.g., “I get angry with this student”), nor self-efficacy beliefs (e.g., “This student makes me feel successful as a teacher”), or behavioral descriptions (e.g., “I often praise this student”). Next, as far as necessary, we translated the items into German and reformulated them to represent the teacher’s perception of the whole class. In order to avoid for items to be overly suggestive, instead of asking for teachers’ agreement with valanced statements (e.g., “My relationship with this class is good”) we chose to formulate neutral questions (“How is your relationship with this class?”). These question-type items were to be answered either on a scale from *very bad* to *very good*, or on a scale from *very little* to *very much* (see also Tschannen-Moran & Hoy, 2001, for a similar approach to assess teacher self-efficacy). The resulting initial set of items to assess the teacher-class relationship encompassed thirteen items, including five items concerning the theme of closeness (e.g., “Do you clash with this class?”), five items concerning the theme of conflict (e.g., “Do you feel connected with this class?”), and three items concerning the theme of relatedness (e.g., “How (good) is your rapport with this class?”). Table 1.2 shows all item formulations.

Table 1.2

Teacher-Class Relationship Scale (TCR Scale)

Validated Items	7-Point Likert Scale
1_How is your relationship with this class? *[relationship]* [a] Wie ist Ihre Beziehung zu dieser Klasse?	*very bad* to *very good*
2_How is your rapport with this class? *[rapport]* [a] Wie ist Ihr Draht zu dieser Klasse?	*very bad* to *very good*
4_Do you feel connected to this class? *[connected]* [b] Fühlen Sie sich mit dieser Klasse verbunden?	*very little* to *very much*
6_Can you trust this class? *[trust]* [b] Können Sie dieser Klasse vertrauen?	*very little* to *very much*
9_Do you feel rejected by this class? *[rejected]* [c] Haben Sie das Gefühl, dass diese Klasse Sie ablehnt?	*very little* to *very much*
11_Do you wish you didn't have to teach this class? *[not teach]* [c] Wünschten Sie sich diese Klasse nicht unterrichten zu müssen?	*very little* to *very much*
12_Do you feel respected by this class? *[respected]* [b] Fühlen Sie sich von dieser Klasse respektiert?	*very little* to *very much*
Dropped Items	**7-Point Likert Scale**
3_How do you deal with this class? *[deal with]* [a] Wie kommen Sie mit dieser Klasse zurecht?	*very bad* to *very good*
5_Do you get in trouble with this class? *[trouble]* [c] Geraten Sie mit dieser Klasse in Schwierigkeiten?	*very little* to *very much*
7_Do you clash with this class? *[clashing]* [c] Geraten Sie mit dieser Klasse aneinander?	*very little* to *very much*
8_Do you like this class? [*liking]* [b] Mögen Sie diese Klasse?	*very little* to *very much*
10_Can you rely on this class? *[rely on]* [b] Können Sie sich auf diese Klasse verlassen?	*very little* to *very much*
13_Does this class get on your nerves? *[nerves]* [c] Geht Ihnen diese Klasse auf die Nerven?	*very little* to *very much*

Note. [a] Items pertaining to the theme relatedness. [b] Items pertaining to the theme closeness. [c] Items pertaining to the theme conflict.

Method

Participants and Interview Procedure. Fifty-six teachers were interviewed by three students in the context of their final theses who were trained to use the standardized interview protocol. Three interviews were used for training purposes in the deductive coding phase and thus were excluded from the final sample comprising fifty-three interview partners (60% female). The study sample was purposefully selected to incorporate teachers from all three different types of secondary schools in Bavaria, Germany (n = 15 low track [Mittelschule], n = 19 medium track [Realschule], and n = 19 high track [Gymnasium]). Teachers were recruited through convenience sampling via personal invitations of the interviewers. Interviews took place in the school setting of the teachers and were audio-recorded with the consent of the teacher. The recorded interviews were transcribed verbatim by the corresponding interviewers to ensure that specifics of the interviews were incorporated. Teachers were on average 42.0 years old (SD = 11.5) and had a teaching experience of on average 11.5 years (SD = 10.6). In the interviews, teachers were prompted to think of one specific class they were currently teaching (e.g., "Please answer the question for the class you teach in the second lesson of a regular Tuesday"). Teachers taught this class on average 7.1 hours per week (SD = 6.5) and 34.0 % were home-room teachers. This random selection criterion for the reference class resulted in a representative range of grade levels and school subjects typical for the three school types (n = 19 languages [e.g., German, English], n = 13 science subjects [e.g., Mathematics, Physics], and n = 19 other subjects [e.g., History, Religion]).

The interviews followed a fully structured interview protocol, centering around the 13 initial TCR items which were presented in a fixed order to all participants, alongside scripted prompts for each item's validation (see Table 1.2 for item presentation order). The prompts pertained to the four consecutive steps of the cognitive model of self-report item response which consists of item comprehension, information retrieval, judgement, and response (Karabenick et al., 2007; Willis, 2015). Thus, teachers were prompted to verbalize their reflections according to these cognitive steps for each item. First, teachers were asked to describe their general understanding of the item ("What does this item mean in general?"). Next, teachers rated the item with regard to the specific class along a seven-point rating scale from *very bad*/*very little* to *very good*/*very much*, and were prompted to describe their rating decisions. Two scripted probes revealed which information teachers retrieved to rate the item ("Can you explain your rating?", "Can you give an example?"). Then, teachers were asked to describe the circumstances under which they would rate the item differently ("How would it be if you had chosen a higher/lower rating?"). This last prompt was used to gain insights into teachers' overall judgement and implementation of the rating scale. The interview procedure was supported by PowerPoint slides which showed each of the thirteen items with the answer scale, one item per slide.

Coding Procedure. To carry out the coding procedure, the interview transcripts were imported into the Software package Maxqda 12 (VERBI Software, 2017) and analyzed following the systematic procedure of qualitative content analysis (Mayring, 2014). First, categories were obtained by iterative inductive category formation (Kuckartz, 2016; Mayring, 2014) through scrutinizing the interview material for recurrent themes and discussing them with the group of interviewers. As a result, we obtained a coding scheme that comprised seven distinct and exhaustive categories with detailed definitions using key words and coding examples. We refer

to these categories as thematic codes, because they represent the common themes that teachers associated with the TCR items. The same four students who conducted the interviews participated in this inductive phase of the coding.

Next, performing a deductive coding procedure, four new students were introduced to the interview material to code half of the interviews each with systematic pairwise overlaps across coders, so that code frequencies and interrater reliabilities could be computed. To establish a common coding procedure, each interview was portioned into three paragraphs per item, with each paragraph representing one step of the cognitive answering process (i.e., comprehension, information retrieval, and judgment of the item). The coding rule was defined so that each thematic code could be coded as "present" only once per paragraph allowing for multiple thematic codes to be "present" within each paragraph, which resulted in a range of 0 to 159 = 3 (paragraphs per item) x 53 (interviews) possible codes per thematic code.

Above and beyond coding the paragraphs with the thematic codes, the paragraphs were coded a second time, classifying whether the paragraphs contained statements that referred to either the whole class or to individual students. We referred to these two mutually exclusive codes as conceptual codes. The idea behind the conceptual codes was to quantify, based on the teachers' statements, to what degree they mentally referred to the entire class rather than to individual students.

To calculate the interrater agreement of the different coder pairs, the degree of congruency of thematic and conceptual codes was examined. In line with the coding rule, agreement occurred when both coders coded the same paragraph with the same thematic or conceptual code. Therefore, Gwet's *AC1* was used to calculate the dichotomous ratings for each

coder pair (Gwet, 2008a, 2008b). Interrater agreement of all pairs was very good (.86 < *AC1* < .89).

Resulting Coding Scheme and Analysis Procedure. At the conclusion of the coding procedure, the coding scheme comprised the seven inductively developed thematic codes and the two conceptual codes. The thematic codes were *togetherness*, *knowing each other*, *personal exchange*, *affect*, *teaching*, *discipline,* and *information from third parties*. As detailed above, for the conceptual codes, we differentiated between statements in which teachers spoke about the class as entity vs. individual students of the class (see Table 1.3 for codes, key words, and examples).

The three thematic codes *togetherness*, *knowing each other* and *personal exchange* clearly represented main aspects of the teacher-class relationships as they are inherently connected to the quality of the relationship, which is why we considered them to be core codes. Even though we excluded any explicit affective or emotional terminology in the items, teachers spoke a lot about their feelings when describing their teacher-class relationship, which is why we chose to consider this code labeled *affect* also as core code. Further, we identified the three thematic codes *teaching*, *discipline*, and *information from third parties* as more peripheral to the main aspects of teacher-class relationship as they reflected teachers' specific work context rather than the core phenomenon of teacher-class relationships.

Table 1.3

Coding Scheme

Code	Description/ Keywords	Interview Quotes
Affect	Experiencing teaching/ learning as a pleasure, Being frustrated/ exhausted, experiencing tension or strain	*"that I like going to this class, that I like to prepare the lessons; that I'm not so tense";* *"it's simply the feeling I have when I'm going to a class and you notice it when you meet students"*
Togetherness	Relaxed atmosphere, being friendly, making jokes Being distant, getting through, doing the job	*"that we treat each other in an understanding way, that both sides respect each other";* *"that they realize that we are in the same boat, that we have the same goal which is to move them forward*"
Knowing each other	Process/time to learn more about the other party, development Joint activities, excursion/projects beyond teaching time	*"that I get to know them in other situations than the teaching context";* *"that I know the students well (and that) they know me too."*
Personal exchange	Being in contact beyond the subject, private/personal interest	*"that you can talk to the students outside teaching time…or ask them 'what's going on?'";* *"that there is a basis of trust: the students feel like they can come to me with any concern"*
Teaching	Smooth teaching/ working together, participation in lessons Grading/ performance level Accomplishing tasks/homework, being prepared	*"we have a good learning atmosphere";* *"that's how students work with me, how they react to my instructions or to what I want to make clear"*
Discipline	Disruptions/ conduct problems, enforce disciplinary measures Setting/ following rules/ limits	*"they know what's important to me regarding performance or behavior in the classroom";* *"I would have to work on discipline a lot and would have to focus on it permanently"*

Information from third parties	Exchange/ Contact with colleagues/ parents	*"that collaboration with parents is smooth: like, when something happened at school, that the kids tell their parents; and the other way around, that parents let me know when something happened at home"*
Class [a]	they, we, the students, the lower/upper grade	*"everybody feels good"* *"I already had classes with whom it was easier"*
Students [a]	the girls/ boys, several/ some students, he/she, this student	*"for some of the students"* *"one or two forgetful students"*

Note. [a] Conceptual code indicating the point of reference of the statement.

Results

The code frequencies for each of the 13 TCR items are shown in Table 1.4. Notably, teachers talked a lot about themes that we considered peripheral, resulting in an average ratio of core codes versus peripheral codes of 1.15: 1 in favor of core codes. The average ratio of conceptual codes in terms of class versus students was 2.47 (class): 1 (student), showing that teachers talked considerably more about the whole class than about individual students.

We chose to consider an item as cognitively valid when it reached a ratio of thematic codes of at least 1: 1 (i.e., equal numbers of core and peripheral codes) and a ratio of conceptual codes of above 2 (class): 1 (students). By this, we considered items as poor in cognitive validity if they triggered a relatively high number of statements coded as peripheral, and/or a relatively high number of statements referring to individual students. Applying this code-ratio rationale, the items "deal with" and "trouble" were invalid regarding the thematic and the conceptual ratio, and the items "nerves", "rely on", "clashing" and "trust" were invalid regarding their thematic ratio,

but valid based on the conceptual ratio; the item “liking” was invalid regarding its conceptual ratio, but valid based on its thematic ratio.

Discussion

The key aim of the qualitative study was to explore the cognitive validity of our 13 newly developed items to assess teacher-class relationships. In addition, by having teachers elaborate their thoughts about their teacher-class relationship, we also obtained important insights on how teachers conceptualized the phenomenon relationship with a class, and what they considered important aspects of a high-quality relationship. In this respect, we found that a good teacher-class relationship was typically described as knowing each other well, achieving social togetherness, and sharing personal concerns. Additionally, teachers’ mental representation of a good relationship with a class was associated with a general positive feeling while thinking of and interacting with the class.

Table 1.4

Code Frequencies of Thematic and Conceptual Codes Across the TCR Items

Code	Relationship	Deal with	Rapport	Connected	Trouble	Trust	Clashing	Liking	Rejected	Rely on	Not teach	Respected	Nerves
Core Codes													
Affect	53	45	37	45	32	19	19	57	56	22	58	39	42
Knowing each other	54	39	62	55	40	28	28	51	62	26	33	50	20
Personal exchange	32	20	23	51	24	26	26	28	13	30	25	13	4
Together-ness	27	8	35	30	9	6	6	11	16	4	1	6	5
Peripheral Codes													
Teaching	44	74	37	29	64	41	41	39	33	41	37	33	47
Discipline	46	68	17	16	54	63	63	31	32	61	41	54	56
Information	3	8	8	10	12	6	6	7	7	4	7	4	2
Conceptual Codes													
Class	110	106	113	126	87	113	113	103	129	120	126	119	111
Students	49	53	46	33	72	46	46	56	30	39	33	40	48
Ratio Core : Peri	**2.09**	0.98	**2.53**	**3.31**	0.73	0.94	0.94	**2.60**	**1.43**	0.80	**1.51**	**1.18**	0.78
Ratio Class : Students	**2.24**	2.00	**2.46**	**3.82**	1.21	**2.46**	**2.46**	1.84	**4.30**	**3.08**	**3.82**	**2.98**	**2.31**

Note. Thematic codes: More than one code per item possible. Conceptual codes: Only one code per item possible (mutually exclusive). Possible range of each code per item = [0; 153]. Items with a ratio of (Core: Peri) **> 1** and a ratio of (Class: Students) **> 2** were retained.

Generally, teachers intuitively understood the meaning of the items, could easily retrieve examples, and were able to differentiate the gradations of the scale. As we strove to specifically measure teachers' mental representation of their relationship with an entire class, we used a code-ratio rationale to ensure a clear delineation of the teacher-class relationship from concepts that we excluded from our definition and to ensure a high prevalence of class-statements. As a result, six of our initial TCR items were particularly suitable and valid in assessing the teacher-class relationship as teachers clearly associated those items with close, caring, friendly, and considerate interactions with the class as entity or the lack of those quality interactions. These were the items pertaining to judgments about relatedness, rapport, and connectedness with the class, feeling respected by the class, and two inverted items that tapped the lack of quality in the relationships, namely feeling rejected by the class and wishing one would not have to teach the class.

Furthermore, we decided to keep the item "trust" as 49% of the teachers had already spontaneously spoken of the idea of trust before this particular item was actually mentioned in the interview, and within the existing literature, trust has also repeatedly been named as an important ingredient of different kinds of relationships within the school context (Bryk & Schneider, 2002; Goddard et al., 2001; Schulte-Pelkum et al., 2014; Tschannen-Moran & Hoy, 2000). In sum, we proceeded to the quantitative study with seven items emerging from the qualitative cognitive validation study.

Study 1.2

Study 1.2 had two goals. The first goal was to analyze the TCR scale with regard to its internal validity (scale homogeneity and internal consistency), and to potentially exclude items in case of poor item functioning. Our second goal was to provide evidence of the final scale's external validity by exploring links between the TCR score and other constructs relevant for teachers, including teacher ratings of their teaching emotions, burnout, teaching self-efficacy, and emotional labor. We expected that each of these constructs would be clearly empirically separable from the teacher-class relationship as conceptualized in our scale. In other words, we expected scale mean correlations with those established scales being low enough to warrant conceptual separation and to document the discriminant validity of our new scale. Regarding construct validity, we expected, nevertheless, that the TCR scores would be systematically positively correlated with teaching enjoyment and negatively correlated with teaching anxiety, anger, burnout more generally, and positively linked with teaching self-efficacy, due to underlying reciprocal functional links between relationship quality and teachers' competence beliefs, their wellbeing, and emotional experiences (Aldrup et al., 2018b; Davis, 2006; Hagenauer et al., 2015; Hamre & Pianta, 2006; Taxer et al., 2019). As for emotional labor, our correlational analysis was largely explorative as we know of no prior studies that have addressed the links between emotional labor and teacher-student relationships. In Study 1.1, however, teachers had described that they could express their emotions more authentically when their relationship with a class was good, suggesting a link between these two constructs.

Method

Sample. In total, $N = 209$ secondary school teachers (72.2% female) participated in this study. Teachers were recruited by informing school leaders about the purpose of the study using

personal contacts and snowball technique. The sample comprised teachers from all three types of the German secondary school system (*n* = 37 low track [Mittelschule], *n* = 50 medium track [Realschule], *n* = 92 high track [Gymnasium]), and additionally included teachers from upper vocational schools (*n* = 13 [Berufsschule]). Participants were on average 42.5 years old (*SD* = 11.2) and had on average 13.0 years (*SD* = 10.7) of teaching experience. They taught their class on average 6.7 hours (*SD* = 6.1) a week and taught a variety of subjects (36.8% languages [e.g., German, English]), 28.2% sciences [e.g., Mathematics, Physics]), and 31.1% other subjects [e.g., History, Religion]).

Measures. In addition to the seven TCR items, the questionnaire included a range of widely used scales that address teachers' experiences with regards to teaching a specific class in particular (asking the teachers to answer the questions for the class they teach on a regular Tuesday in the second lesson) and with regard to their job in general. The class-specific constructs encompassed teachers' *emotions* and teachers' *self-efficacy*. Teachers' experiences of *enjoyment*, *anger* and *anxiety* during teaching a specific class, were measured by Frenzel et al.'s Teacher Emotions Scales (TES; Frenzel et al., 2016). The TES comprises four items for each emotion that are answered on a 5-point Likert Scale (from *strongly disagree* to *strongly agree*). Sample items are "I enjoy teaching these students" for *enjoyment* (α = .93), "Teaching these students frustrates me" for *anger* (α = .87), and "I feel tense and nervous teaching these students" for *anxiety* (α = .81). Teachers' *efficacy* beliefs were assessed by Tschannen-Moran and Hoy's teacher self-efficacy scale (2001), using a short, class-specific version of the Ohio State teacher efficacy scale (OSTES; Tschannen-Moran & Hoy, 2001) that comprises three subscales: *efficacy for classroom management* (4 items, e.g., "How much can you do to control disruptive behavior in this classroom?"; α = .86), *student engagement* (4 items, e.g., "How much

can you do to motivate students who show low interest in school?"; α = .80), and *instructional strategies* (3 items, e.g., "How well can you respond to difficult questions from these students?"; α = .78). The OSTES items are answered on a 7-point Likert scale ranging from *very little*/*very bad* to *very much*/ *very good*.

The job-related constructs encompassed teachers' self-reported *burnout* and *emotional labor*. Teachers' self-reported *burnout* symptoms as assessed by the German translation of the Maslach Burnout Inventory encompassed *emotional exhaustion*, *lack of accomplishment* and *depersonalization* (Enzmann & Kleiber, 1989). The items were answered on a 7-point Likert Scale (from *never* to *daily*). The subscale *emotional exhaustion* comprised nine items (e.g., "I feel used up at the end of a school work day"; α = .86), the subscale *lack of accomplishment* comprised eight items (e.g., "I feel very energetic (reversed)"; α = .81), and the subscale *depersonalization* comprised five items (e.g., "I feel I treat some students as if they are impersonal objects"; α = .67). Teachers' *emotional labor* was assessed by the revised version of the Emotional Labor Scale, encompassing three items for each dimension of *deep acting*, *hiding feelings*, and *faking emotions* (ELS; Lee & Brotheridge, 2011). The items were answered on a 5-point Likert Scale (from *never* to *always*) and sample items are "I make an effort to actually feel the emotions that I need to display to others" for *deep acting* (α = .82), "I hide my true feelings about a situation" for *hiding feelings* (α = .78), and "I pretend to have emotions that I don't really have" for *faking emotions* (α = .67). Scale means, standard deviations, and Cronbach's alphas of all of these scales are shown in Table 1.5a and 1.5b.

Results

Item Analysis. To explore the underlying theoretical structure of our TCR items, we followed Watkin's best practice recommendations (2018). We evaluated means, standard deviations, skewness and kurtosis values, and item difficulty for each of the TCR items. As shown in Table 1.6, mean ratings of the items with positive connotation (pertaining to the theme closeness and relatedness) were relatively high (> 5 on the 7-point scale) and mean ratings of items with negative connotation (pertaining to the theme conflict) were relatively low (< 3). Standard deviations, however, were sufficiently large to preclude ceiling or floor effects (.81 ≤ *SD* ≤ 1.29). The skewness and kurtosis values of some items were also relatively high (> 2 and > 6 for "not teach" and "rejected"), and the item difficulty of the positive connotated items was rather easy (73 < *ID* < 87, considering the classical item theory difficulty index ranging from 0 to 100; Lord, 1952), whereas negatively connotated items were difficult to answer (*ID* < 10). Thus, the response patterns indicated an overall trend of teachers to evaluate their teacher-class relationships very positively.

Table 1.6

Item Parameters of the TCR Items

Item	*N*	*M*	*SD*	Skewness	Kurtosis	Item Difficulty
Relationship	201	5.99	.93	-1.30	2.82	79.8
Rapport	204	5.92	1.06	-1.57	3.66	81.9
Connected	205	5.72	1.24	-1.07	0.78	74.3
Trust	204	5.43	1.29	-1.04	1.14	73.8
Respected	205	6.20	1.03	-1.98	5.69	86.6
Rejected	204	1.46	.81	2.37	6.94	9.1
Not teach	205	1.44	1.21	3.19	9.91	7.3

Internal Validity. Investigating the underlying scale structure, we ran factor analyses based on the Pearson Correlation Matrix and on the Polychoric Correlation Matrix, due to the violation of normality by the items' distribution (Curran et al., 1996). Additionally, we computed a parallel analysis for each correlation matrix. All calculations were done using R and the "psych" package (R Core Team, 2021).

First, we ensured that our data was appropriate for an exploratory factor analysis: Bartlett's test confirmed the factorability of the correlation matrix (χ^2 (21) = 665.305, $p < .001$) and the Kaiser-Meyer-Olkin (KMO) measure indicated good sampling adequacy (KMO = .838). Accordingly, we ran a common factor analysis with the estimation method MINRES, also known as OLS (see e.g., Norris & Lecavalier, 2010), based on both the Pearson and the Polychoric Correlation Matrix. The one-factor solution accounted for 55.8% (52.1%) of the total variance and factor loadings ranged between .54 and .88 according to the Pearson Correlation Matrix, and between .59 and .76 according to the Polychoric Correlation Matrix (see Table 1.7). Using both matrices, two parallel analyses (Horn, 1965) were conducted, which both confirmed that the number of underlying factors was one.

Second, we computed the reliability of the total scale and the corrected item-total correlations (item discrimination) to ensure sufficient homogeneity and internal validity. Internal consistency of the final scale was high (Cronbach's $\alpha = .89$) and corrected item-total correlations of all seven items were good ($.50 \leq r_{corr} \leq .81$), justifying the retention of all items, especially the item "trust" as it demonstrated high factor loadings (.63/.59) and corrected item-total correlation (.60).

Third, we ran a confirmatory factor analysis using the lavaan package in R, and the tested one factor model ($\chi^2(14) = 50.547$, $p < .001$) demonstrated good fit indices (CFI = .95, TLI =

.93, SRMR = .04) with only the RMSEA = .115 being slightly out of the recommended boundaries for adequate model fit (Hu & Bentler, 1999). Exploration of model modification indices revealed that allowing three error correlations among the items would yet substantially improve the model fit ($\chi^2(11) = 26.104$, $p < .001$; CFI = .98, TLI = .96, SRMR = .03; RMSEA = .08). The correlated errors occurred between the two relatedness items, and between the item *respected* and the two conflict items. The two relatedness items share the same semantic structure which well explains their shared uniqueness above their substantial meaning in terms of relationship quality. Further, the shared uniqueness of *feeling respected* with *not wanting to teach the class* and *feeling rejected by the class* likely reflects the emphasis teachers put on respectful behavior as prerequisite for good relationship quality.

Table 1.7

Factor Loadings of the TCR Items

Item	Pearson [a]	Polychoric [b]
Relationship	.88	.75
Rapport	.82	.74
Connected	.80	.71
Trust	.63	.59
Respected	.82	.76
Rejected - reversed	.54	.74
Not teach - reversed	.68	.76

Note. [a] Factor analysis based on the Pearson Correlation Matrix. [b] Factor analysis based on the Polychoric Correlation Matrix.

External Validity. Having decided that we would retain all seven items in our scale, we next built a mean index and correlated it with the scale means of the validation constructs

included in this study. Results are shown in Tables 1.5a (class-specific scales) and 1.5b (job-related scales).

Correlations of the teacher-class relationship with teachers' class-specific emotions were high, specifically for enjoyment ($r = .80$) but also for anger and anxiety ($r = -.67/ -.68$). Additionally, a systematic link between the TCR score and teachers' beliefs about their efficacy for student engagement, classroom management and instructional strategies was found, with moderate positive correlations of similar size between the teacher-class relationship and all three subscales of the teacher self-efficacy scale ($r = .57/.66/.53$).

In addition, our analyses also revealed moderate correlations between the TCR score and teacher variables on the job-level: the teacher-class relationship was negatively connected to all three burnout symptoms (emotional exhaustion: $r = -.24$; depersonalization: $r = -.41$; lack of accomplishment: $r = -.45$). Finally, the two facets of surface acting, faking and hiding emotions, were negatively related to the TCR score ($r = -.23/ -.36$), whereas deep acting was positively related to the TCR score ($r = .23$). All reported correlations were significant at a $p < .01$ level.

Table 1.5a

Latent Correlations of the TCR Scale and Class-Level Variables

Variable – class level	1	2	3	4	5	6	7
1. Teacher-Class relationship	—	.80	–.67	–.68	.57	.66	.53
2. Teaching Enjoyment		—	–.74	–.69	.57	.58	.48
3. Teaching Anger			—	.68	–.41	–.54	–.39
4. Teaching Anxiety				—	–.45	–.64	–.60
5. SE for Student Engagement					—	.52	.46
6. SE for Classroom management						—	.62
7. SE for Instructional Strategies							—
Cronbach's Alpha α	.89	.93	.87	.81	.80	.86	.78
Mean	6.05	4.02	2.13	1.53	4.73	5.80	5.82
SD	.85	.87	.92	.69	.99	.93	.81

Note. All reported correlations are significant at the $p < .01$ level; SE: Self-efficacy.

Table 1.5b

Latent Correlations of the TCR Scale and Job-Level Variables

Variable – job level	1	2	3	4	5	6	7
1. Teacher-Class relationship	—	–.24	–.41	–.45	.23	–.23	–.36
2. Emotional Exhaustion		—	.45	.38	n.s.	.25	.35
3. Depersonalization			—	.43	–.22	.45	.39
4. Lack of Accomplishment				—	–.29	.34	.41
5. EL: Deep Acting					—	n.s.	n.s.
6. EL: Faking Emotions						—	.62
7. EL: Hiding Feelings							—
Cronbach's α	.89	.86	.67	.81	.82	.78	.67
Mean	6.05	1.79	1.06	1.69	3.46	1.87	2.34
SD	.85	.96	.88	.84	.97	.72	.68

Note. All reported correlations are significant at the $p < .01$ level; EL: Emotional labor; n.s.: Not significant.

Discussion

The results of the quantitative validation indicated that the final TCR scale measuring the teacher-class relationship fulfilled the essential quality criteria of measurement. The internal validity of the TCR scale revealed that the seven items measured the underlying construct highly reliably, reflecting a largely one-dimensional construct structure. It is worth noting, though, that we found that some items shared fractions of variance above and beyond their shared meaning of teacher-student-relationship quality. Future potential users of the TCR scale adopting a latent variable framework may want to consider those correlated uniquenesses for most solid results (see Study 1.2 results for details).

The results regarding the external validity of the scale showed that the teacher-class relationship construct was significantly connected with a range of concepts addressing the teachers' experiences during teaching. All correlations underlined the expected direction of a high-quality teacher-class relationship being associated with positive aspects of teaching and teachers' wellbeing: High ratings of the relationship quality with a class were correlated with less negative emotions and more enjoyment while teaching that class, as well as with a greater sense of self-efficacy in terms of motivating the class's engagement, managing classroom behavior, and responding to instructional challenges. Similarly, a good teacher-class relationship was negatively related to all three facets of burnout, while those correlations were generally lower because burnout was measured with respect to teaching most generally, which speaks to the specificity of our new instrument and against the fact that any observed correlations were mere

artifacts of a common method bias. Notably, the link with the TCR score was comparably low for emotional exhaustion, and considerably higher for depersonalization and lack of accomplishment. Additionally, the teacher-class relationship was significantly related to the degree of how much teachers would hide, fake, or enact emotions during the workday.

Regarding the discriminant validity of our TCR scale, the correlations with teachers' self-reported burnout, their self-efficacy, and emotional labor were small to medium-sized, indicating that the TCR score was clearly separable from those constructs. Notably, the correlations with teachers' emotional experiences were rather high, which did surprise us as we excluded any items from the TCR scale that would explicitly address discrete emotional experiences. Overall, given that both the teacher-class relationship and the teaching emotions were measured with high reliability, and that a common method bias likely inflated the observed correlations as all constructs were measured through teacher self-report (Podsakoff et al., 2003), we argue that these correlations were still small enough to warrant conceptual separation between these discrete teaching emotions and the relationship quality with the class. On a substantial level, those high correlations do speak to the fact that teachers' emotional experiences when teaching a specific class seem to be quite closely connected with their mental representation of the relationship quality with that class. This supports notions brought forward in the context of self-determination theory in which the concept of relatedness was described as an "emotional and personal bond" with others (Ryan & Powelson, 1991, p. 53), and characterized by "frequent, affectively pleasant interaction (…) in the context of a temporally stable and enduring framework of affective concern for each other's welfare" (Baumeister & Leary, 1995, p. 497). While those ideas have so far been proposed only for dyadic interactions (i.e., relationships

between two individuals), the present research shows that these ideas apply to an individual-group relationship context, such as teacher-class relationships.

Overall, we conclude that we have been successful in differentiating the teacher-class relationship as measured with our new scale from teachers' emotions and their self-efficacy. However, we also constructed our new scale to differentiate teachers' representations of their relationship with a class from teachers' social and interpersonal behaviors, but the current study did not provide any explicit evidence of the discriminant validity of our new TCR scale regarding teacher behaviors such as academic support. Thus, future research should explore the links between TCR scores and teachers' social support, for instance as assessed in the COACTIV study (Aldrup et al., 2018a) or with the Engaged Teachers Scale (ETS, Klassen et al., 2013), and teachers' provision of warmth and comfort (CLASS-S, Hafen et al., 2014).

General Discussion

Teacher-student relationships are not only important for students, but also for teachers and their wellbeing. While prior research has brought forward a large number of instruments addressing the phenomenon of teacher-student relationships from various angles, a validated instrument to measure teacher-class relationships from the perspective of the teacher, while considering the entire class as interaction partner, has been missing. We implemented a two-fold validation procedure to scrutinize the validity and reliability of our newly developed set of items, combining qualitative and quantitative validation methods to identify the most suitable items with regard to their cognitive validity and the psychometric quality.

Based on the cognitive validation interviews, we deleted items if they elicited too many associations with phenomena that were not at the core of the phenomenon of teacher-class relationships, such as classroom management or successful instruction. Additionally, we made

sure that the items used for the final TCR scale distinctly addressed teachers' mental representations of the relationship with the entire class rather than individual students within the class. As a result, the remaining items clearly represent teachers' mental representations of the quality of the relationship between a teacher and their class as a whole. The follow-up quantitative psychometric analyses confirmed that the final set of seven items represent a reliable, valid, and parsimonious instrument to measure teachers' self-reported quality of the teacher-class relationship.

Above and beyond the internal validation of the newly developed TCR scale, this research also highlighted insights into the nature and importance of the teacher-class relationship. Below, we will summarize and discuss the interrelations between teachers' judgments of relationship quality and their teaching experience regarding a specific class and regarding their job more generally, which we gained from synthesizing across our qualitative and quantitative findings. Overall, the teachers' statements in the interviews from Study 1.1 meaningfully complemented our quantitative correlational findings from Study 1.2, and together, the two studies enrich our conceptual understanding of this relational phenomenon.

First of all, we observed close links between the teacher-class relationship and teachers' emotional experience during teaching and their self-efficacy in teaching the corresponding class. Consistent with findings from previous studies (Hagenauer et al., 2015; Klassen et al., 2012; Taxer et al., 2019), teachers reported more enjoyment and less anger and anxiety when teaching a class with which they had a positive relationship. Having good relationships with students is clearly rewarding for teachers (Hargreaves, 2000), contributes to their need fulfillment of relatedness in the workplace (Klassen et al., 2012), and thus, elicits positive emotions. Correspondingly, in the interviews, teachers referred to their "good feeling" when describing the

quality of their relationship with a class. In other words, teachers also seemed to use their emotions as social information to judge the quality of their relationships (Taxer et al., 2019; van Kleef et al., 2016). The idea that teachers experience fewer negative emotions when teacher-class relationships are good speaks to the fact that they appraise students' behavior in this class as more consistent with their goals (Chang & Davis, 2009; Frenzel et al., 2020). This could be due to several reasons, in particular that students show less disruptive, disengaged behavior given good teacher-class relationships, or that teachers feel more able to cope with these behaviors.

Teachers in our study also felt more successful in teaching a class with which they had a good teacher-class relationship: The three dimensions of teacher efficacy were positively correlated with the TCR score and, in the interviews, teachers spoke about their impression that the better their relationship with a class, the more confident they were that they could manage the class. Thus, a good teacher-class relationship might foster teachers' beliefs in their efficacy, or conversely, teachers with greater feelings of self-efficacy are better able to form relationships with their students (Mashburn et al., 2006; O'Connor, 2010).

Teachers' judgments of their relationship with a class were negatively associated with their burnout symptom ratings and this also reflected in teachers' interview statements. In the interviews, the teachers described that high-quality relationships can be a resource against depersonalization and conversely, that bad teacher-class relationship can be a source of exhaustion. These links between the teacher-class relationship and teachers' burnout symptoms are in line with findings from prior studies (Aldrup et al., 2018b; Klassen et al., 2012; Taxer et al., 2019) and underline the significance of the teacher-class relationship for teachers' wellbeing.

As a result of increased negative emotions – potentially emerging from poor teacher-class relationships – teachers have to engage in emotional labor (Chang, 2009; Chang & Davis, 2009).

In line with this, our data showed that emotional labor was linked to the teacher-class relationship; specifically, teachers who rated their teacher-class relationship as being less favorable reported to suppress and hide their felt emotions more often than teachers with a good teacher-class relationship. Correspondingly, in the interviews, teachers described that they could express their emotions more authentically when their relationship with a class was good.

Finally, a strikingly dominant observation from the interviews was that many teachers argued that having a good teacher-class relationship was an inherent part of their job and an essential prerequisite of successful teaching and learning. Additionally, in both the face-to-face interviews and in the anonymous paper-pencil survey, teachers rated the quality of their relationship with a class to be very high, suggesting that teachers strive to connect with the classes they teach as part of their professional role (Butler, 2012; O'Connor, 2008). Thus, the teacher-class relationship might be just as important for teachers as individual teacher-student relationships (Spilt et al., 2011). Developing a good teacher-class relationship seems to be engrained in teachers' identities and to be tightly linked with their teaching practices and their wellbeing (see also van der Want et al., 2015; Zembylas, 2003).

Limitations and Future Directions

One potential limitation of the present research is that we used convenience samples of teachers in both studies, thus limiting the generalizability of the results and introducing a potential positive bias in the sample. Well-regulated teachers rating the items very positively may have been overrepresented in the samples because highly burdened teachers with potentially poor teacher-class relationships might have been reluctant to spend additional time outside school to participate in this type of research. Even though we placed great emphasis on avoiding suggestive item wordings by using a question format for our items instead of suggestive

statements, the full rating scale was rarely used by participants. Thus, the TCR scale could be refined further by adapting the items' rating anchors so that the scale score optimally differentiates at the high end of the scale.

It is worth mentioning that it was not within the scope of our study to determine the degree to which teachers' TCR scores related to their ratings of the dyadic relationships with each of the students in the class. Our interview data suggests that teachers' perception of individual students is relevant for their judgment of the relationship quality with a class, while it seems that some individual students stick out in teachers' minds. Thus, future research is needed to investigate how dyadic relationships should be weighed to best match the teachers' mental representation of relationship quality with the entire class.

Additionally, it is important to bear in mind that all data reported is correlational in nature and therefore no causal direction can be deduced. Both our interview data and the correlations suggest that there is a complex interaction between teachers' emotional and relational experiences in the classroom, connected to their wellbeing and burnout symptoms, as indicated by previous research (Spilt et al., 2011; Taxer et al., 2019). Longitudinal research would be necessary to disentangle these likely reciprocal relationships with emotion-related constructs and possible bidirectional associations between teachers' self-efficacy and the quality of their relationship with the class.

Despite these limitations, the findings of the present research show that the construct teacher-class relationship can be meaningfully operationalized as a relational phenomenon that addresses the relationship between teacher and class. Teachers answered our newly developed TCR scale consistently and connected the teacher-class relationship with several indicators of their emotional and professional wellbeing. The TCR scale offers researchers a new validated

scale that has a clear-cut, concise definition of the idea of a teacher-class relationship that targets an important aspect of teachers' lives through an efficient, valid, and reliable 7-item self-report instrument. While the key focus of our research was on the validation process for the new scale, the research also brought about substantial findings about the nature of teacher-class relationships through the combination of qualitative and quantitative methods. These findings again underline the relevance of teacher-student relationships for teachers (Klassen et al., 2012; Spilt et al., 2011; Taxer et al., 2019) and align with earlier research using non-validated sets of items assessing teacher-perceived relationship quality with the class (Aldrup et al., 2018b; Hagenauer et al., 2015). The results show that the relational processes in the classroom go beyond the development of individual, dyadic teacher-student relationships and involve the class as a kind of relational partner. The emergence of the teacher-class relationship construct might inspire future research to disentangle the intriguing, yet unexplored interactions between teachers' relationships with individual students and their relationship with the group of students (assuming that the group is more than the sum of its parts). Furthermore, we hope that the existence of the TCR scale fuels research that further investigates the functional and causal mechanisms involved in teachers' relational experiences, their wellbeing, and classroom functioning more generally, including important student outcomes such as motivation and performance.

3. Study 2

The "Teacher-Class Relationship" – An Empirically-Grounded Framework of Teachers' Relationships With Their Classes

"The relationship is some sort of rapport between the teacher and one class (…) the basis for everything we do together." – Hannah, a secondary school teacher who argues that the teacher-class relationship is fundamental for everything that teacher and class do together.

Teaching is a social profession and the interaction with students plays an important role for teachers in their everyday work life and it strongly influences their emotions (Hargreaves, 1998, 2000; Schutz et al., 2007). The interaction with students can take various forms: it can be joyful and relaxed as Lilly[3], a teacher in a lower track school in Germany, explains ("When you go back to class every morning with a good feeling, not hoping that the time will go by quickly.") or it can be very challenging as Matthew, a teacher in a German middle track school, describes ("When I walk out of a class and afterwards I feel like I've done a whole day after two hours."). Recent research showed that the quality of teachers' relationships with students affects teachers' emotions, their work-enthusiasm, and wellbeing (Aldrup et al., 2018b; Hagenauer et al., 2015; Klassen et al., 2012; Milatz et al., 2015). Even though these studies operationalized teachers' relationships with a group of students, the theoretical background is yet based on a dyadic conceptualization of the relationship, that is the relationship pertains to one teacher and a single student (Pianta, 1999a). To better understand the specific relationships that teachers build with a group of students, we see the need for a conceptual framework that describes the relationship between a teacher and a group of students (i.e., a non-dyadic, individual-group

[3] Pseudonyms were used to preserve teachers' anonymity

phenomenon). Further, we argue that teachers perceive the class, that is a specific group of students, as the relationship partner in the classroom. Especially for secondary school teachers, who teach various classes in their daily routine, the interaction with individual students is limited and thus the class as a group is a salient point of reference. This is in line with research that showed that teachers' emotional experiences and class-specific interaction patterns varied across the classes they taught (den Brok et al., 2004; Frenzel et al., 2015; Kunter et al., 2011). Therefore, we introduce the new construct *teacher-class relationship* to describe the relational processes that unfold between a teacher and a class.

In this contribution, we present a conceptual framework of the teacher-class relationship that is based on teachers' narratives about their relational experiences with a class. To gain insights into how teachers perceive and make meaning of the relational processes between them and a class, we conducted cognitive interviews with teachers. We analyzed the empirical data using the methodological principles of grounded theory because it allowed us to gain a new theoretical understanding of this unexplored phenomenon. Thus, our conceptual framework provides a theoretical, yet empirically based foundation to understand and advance research on teacher-class relationships. Furthermore, the framework can provide teachers with the opportunity to reflect on their relationships with classes and to develop ideas of how to improve these relationships and subsequently their emotional wellbeing.

Relationships in the Classroom

Relationships between teachers and students have been studied from different theoretical perspectives and there are several frameworks conceptualizing teacher-student relationships. The theoretical perspectives taken to study teacher-student relationships include attachment theory, interpersonal theory, self-determination theory, and social-motivational theories (for an overview

see Davis, 2003; Wentzel, 2009, 2012). The attachment-based approach and the interpersonal approach have been applied for several decades (Sabol & Pianta, 2012; Wubbels & Brekelmans, 2005) and offer two distinct theoretical frameworks to operationalize teacher-student relationships. The attachment-based framework by Pianta and colleagues (Pianta, 1999b; Sabol & Pianta, 2012) presents a model of the teacher's relationship with a child as dyadic system, which is similar to the parent-child dyad, providing a secure base for the child to develop. The model of interpersonal behavior by Wubbels and colleagues (Wubbels et al., 2012; Wubbels & Levy, 1993) describes the teacher's interpersonal behavior towards students based on a circumplex model of interaction that influences students' affective and academic outcomes (Wubbels & Brekelmans, 2005). Models that are based on self-determination theory demonstrate that teachers who show involvement with their students satisfy students' need for relatedness and thus, foster students' motivation and engagement (Connell & Wellborn, 1991; Skinner et al., 2008). A model that describes teacher-student relationships as part of a larger motivational context outlines how the relationship with a teacher providing emotional support influences students' goal pursuit (Wentzel, 2004). An integrative model of the teacher-student relationship summarizes different theoretical perspectives to describe the contextual factors that influence the relationship quality of the teacher-student dyad (Davis, 2006).

Overall, these theoretical frameworks focus on the effects that teacher-student relationships have on students, even though the authors mention that teachers and students influence each other reciprocally in these relationships (Wubbels et al., 2014; Wubbels et al., 2006) and that teachers can satisfy their own needs by establishing relationships with students (Davis, 2006). Considering the effects of teacher-student relationships on teachers, more recent

work demonstrated that teachers have a need for relatedness with their students and that these relationships influence teachers' wellbeing (Klassen et al., 2012; Spilt et al., 2011). From a teacher's perspective the question arises which partners "constitute the dyad when there is one teacher and many students involved in the classroom situation" (Riley, 2011, p. 30). Growing empirical evidence showed that teachers' relationships with the students of a class influenced their emotions and wellbeing and identified the group of students as important relationship partner of the teacher (Aldrup et al., 2018b; Taxer et al., 2019). Furthermore, research on teachers' emotional experiences showed that the class makes a difference with respect to which emotions teachers experience during teaching (Frenzel et al., 2015; Kunter et al., 2011). Thus, we argue that the class as relationship partner is salient in teachers' perceptions and label the relationship between a teacher and the class (i.e., a specific group of students) teacher-class relationship (i.e., individual-group phenomenon). We conclude that a framework of the teacher-class relationship is needed to analyze teachers' relationship experiences with all students of one class and to describe the effects of these relationships on teachers.

Characteristics of Teacher-Student Relationships

Reviewing existing models of teacher-student relationships, we extrapolated three characteristics that are common among the different theoretical approaches. We consider these characteristics to be essential for understanding and conceptualizing relationships between teachers and students. These characteristics are that teacher-student relationships i) are based on the mental representations of teachers and students, ii) encompass bidirectional processes between teachers and students, and iii) are influenced by the school context.

Mental Representations. Mental representations are an integral part of teacher-student relationships because teachers and students build mental schemata (i.e., internal working models) of their relationships (Brinkworth et al., 2017; Claessens et al., 2016; Stuhlman & Pianta, 2002). These mental representations include the individual's perception of the current relationship and the ongoing interaction, but also the individual's beliefs and feelings about relationships, which are influenced by prior relational experiences (Ryan et al., 1994). Furthermore, they include representations of the self and the other (Newberry & Davis, 2008; Spilt et al., 2011). Mental representations are rather stable and guide the individual's behavior in subsequent interactions and relationships, but they are also open to change through new relational experiences (Pianta et al., 2003). Similarly, real-time interactions are influenced by the individual's perception of the relationship leading to recurring interaction patterns between teachers and students (Wubbels et al., 2014). Such self-stabilizing interaction patterns can alter the generalized perception of the relationship (Wubbels et al., 2012). Teacher and student form different mental representations of their mutual teacher-student relationship because the development of these representations depends on their individual interpretation of the relationship (Hughes, 2011). Thus, it is necessary to investigate teachers' and students' mental representations of teacher-student relationships to gain insight into how teachers and students experience these relationships.

Bidirectional Processes. Teachers and students influence each other in a relationship and share the same need for positive teacher-student relationships. Teacher-student relationships are based on interaction and communication processes in which teachers and students continuously exchange information and reciprocally respond to each other (Pianta et al., 2003; Wubbels et al., 2006). Even though most research focuses on teacher-initiated behaviors, students also actively influence their relationships with teachers by initiating interactions, which underlines the

bidirectional nature of processes between teachers and students (Nurmi & Kiuru, 2015). Furthermore, teachers and students share the same basic psychological need for relatedness (Connell & Wellborn, 1991; Evelein et al., 2008; Ryan & Deci, 2000) and teacher-student relationships can be conceptualized as reciprocal or dual relationships in which teachers also depend on their relationships with students to satisfy their own needs (Davis, 2006; Riley, 2009). Even though the importance of supportive relationships for students' development is well-discussed and documented (e.g. Roorda et al., 2017), teachers' need for relatedness received attention only recently (Klassen et al., 2012; Spilt et al., 2011). Feeling related with people at work was associated with psychological wellbeing (van den Broeck et al., 2016), but teachers' relatedness with students was more important for their emotional wellbeing and motivation than their relatedness with colleagues (Aldrup et al., 2017; Collie et al., 2016; van Droogenbroeck et al., 2014), underpinning the importance of teacher-student relationships. Taken together, teachers and students rely upon each other to create supportive relationships from which both can profit.

Influences of the School Context. Teacher-student relationships are embedded in the broad context of schools which represent a social system with multiple levels and influences (Eccles & Roeser, 1999). Relationships between teachers and students are influenced by characteristics of the school context, such as state policies on the community level, interpersonal climate on the school level, and norms about relationships on the classroom level (Davis, 2006; Pianta et al., 2003). Therefore, the school context has effects on teacher-student relationships by shaping the environment in which the relationships occur and by influencing the individuals and determining their roles in the relationship. Working in the teaching profession, teachers have to enact multiple roles to fulfil the different demands of the school context (Rothland, 2013). Teachers' beliefs and images about what it means to be a teacher are influenced by socially

accepted ideas and common expectations about what it needs to perform in this social position (Beijaard et al., 2004; Kaplan & Garner, 2017). Teachers' beliefs about their professional roles are manifold, which is reflected in the different approaches to investigate them. For example, teachers were asked to choose from different metaphorical pictures comparing the teaching profession with other occupations (e.g., conductor, animal keeper) or to rate their professional identity as a combination of being a subject matter expert, didactical expert, and pedagogical expert (Beijaard et al., 2000; Ben-Peretz et al., 2003). In other studies, teachers were asked to develop metaphors that reflect their beliefs about teaching and learning, which revealed that teachers see themselves taking on different roles such as transmitter of skills or facilitator/coach (Leavy et al., 2007; Martínez et al., 2001). Furthermore, teachers' professional roles encompass an interpersonal aspect reflecting how they want to interact with students and how they have to act as professionals in the school context (Anspal et al., 2018; van der Want et al., 2015). Thus, the interactions between teachers and students – and thereby their relationships – are constrained by the school context, for instance by the professional roles of teachers.

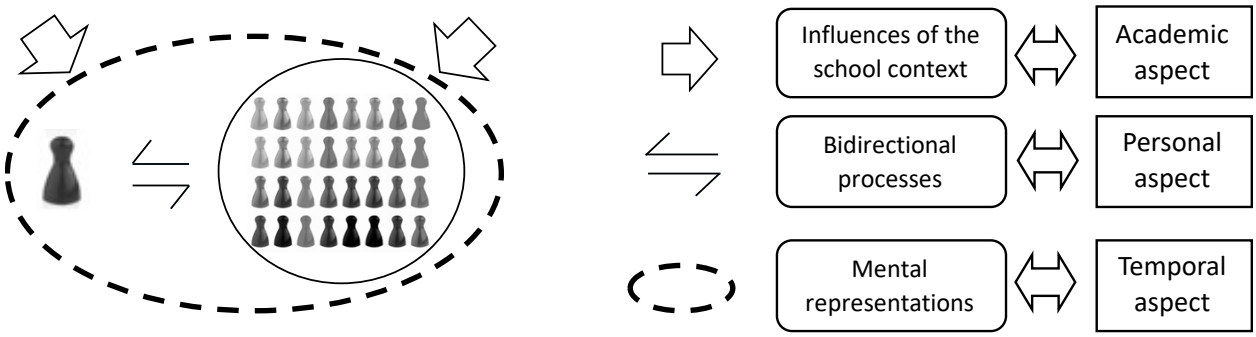
The Teacher-Class Relationship

We define the teacher-class relationship as relational phenomenon between the teacher and the class which shares the characteristics of teacher-student relationships. In doing so, we conceptualize the teacher-class relationships in consistence with the existing models of teacher-student relationships (Davis, 2006; Hamre & Pianta, 2006; Wubbels et al., 2006), with the difference that the relationship partner is the whole class instead of an individual student. Accordingly, the characteristics of teacher-class relationships are that they i) are based on the mental representation of teachers and students (seeing themselves as part of the class), ii)

encompass bidirectional processes between teachers and classes, and iii) are influenced by the school context (see Figure 2.1).

Figure 2.1

The Characteristics of the Teacher-Class Relationship



Mental Representations. In the classroom, teacher and class interact with each other on a regular basis and interaction patterns between them stabilize over time. These patterns of interpersonal behavior between teacher and class can be observed (Mainhard et al., 2012; Pennings et al., 2014) and students reported that teachers developed specific interpersonal styles when interacting with a specific class (den Brok et al., 2004, 2006). We argue that teachers (and students) perceive and judge these recurrent interaction patterns and store them as their individual mental representations of the teacher-class relationship. From research on students' perceptions we know that students have a class perception, that is they perceive themselves as part of the class and the teacher's behavior as directed towards the whole class (e.g., "This teacher is friendly to the class", den Brok et al., 2006, p.201; "This teacher trusts us", Wubbels et al., 1993, p.25; "Our teacher helps us like a friend", Bieg et al., 2011, p.140). Similarly, teachers

should be able to perceive the class as entity and judge the quality of their relationship with a class. Additionally, interaction patterns and mental representations develop and change over time (Gehlbach et al., 2012; Maulana et al., 2012), and thus, it seems plausible that the relationship between teacher and class develops over time. We call the developing nature of the teacher-class relationship and the corresponding mental representations its temporal aspect.

Bidirectional Processes. The teacher and the students of a class share the same need for relatedness, positive interactions, and relationships. Because students form a fixed group with which teachers interact regularly, teacher and class depend on each other in the classroom to create good relationships. Positive relationships are characterized by frequent and personal contacts so that an affective bond of mutual concern grows between the partners in the relationship (Baumeister & Leary, 1995; Ryan & Powelson, 1991). To establish personal contact, teachers and students create spaces in school for informal interaction in which they can negotiate topics outside the subject matter (Frelin & Grannäs, 2010). Additionally, teacher-student relationships often exceed professional interactions and include an emotional bond on a personal level (Riley, 2009). We argue that the quality of interactions between teachers and students shapes their interactions in the class context, and thereby constitutes the quality of the teacher-class relationship. Therefore, the teacher-class relationship is likely of a bidirectional nature in that it fosters the mutual desire for personal connections, and we call this the personal aspect of the teacher-class relationship.

Influences of the School Context. How teacher and class co-create the relational quality of their interactions is constrained by the school context. Interactions in the classroom have been shown to be hierarchically structured due to teachers' roles and status, that is teachers acted out more leading behavior and expected more submissive behavior from students than in less

restricted settings (de Jong et al., 2012; Pennings et al., 2018). Furthermore, teacher-student relationships are asymmetrical because teachers and students have different responsibilities due to their difference in age and experience (Kesner, 2000; Pianta, 1999a; Pianta et al., 2003). We argue that teachers' professional roles that are prescribed by the school context also influence the teacher-class relationship, especially in the classroom context as hierarchical setting. Using Keiler's definition of teacher roles as "what teachers do in classrooms" (Keiler, 2018, p. 3), we derived four different teacher roles from the professional competencies of teachers in Germany: teaching, educating, assessing and counselling, and innovating (KMK, 2004). To enact these professional roles, teachers have to be experts and leaders (teaching), mentors (educating), authorities (assessing), and role models (innovating). These professional roles underline the teacher's more advanced set of competencies and functions in the classroom in comparison to the limited skills of the students (e.g., teachers have more knowledge, life experience, and authority). We call the hierarchically structured nature of the teacher-class relationship in the academic school setting its academic aspect.

In sum, we define the teacher-class relationship as the non-dyadic relationship between one teacher and a class that encompasses i) a temporal aspect describing the development of the relationship and the corresponding mental representations, ii) a personal aspect describing that teacher and class depend on each other to establish personal contact, and iii) an academic aspect describing that teacher and class interact in an academic setting that influences their relationship.

The Present Research

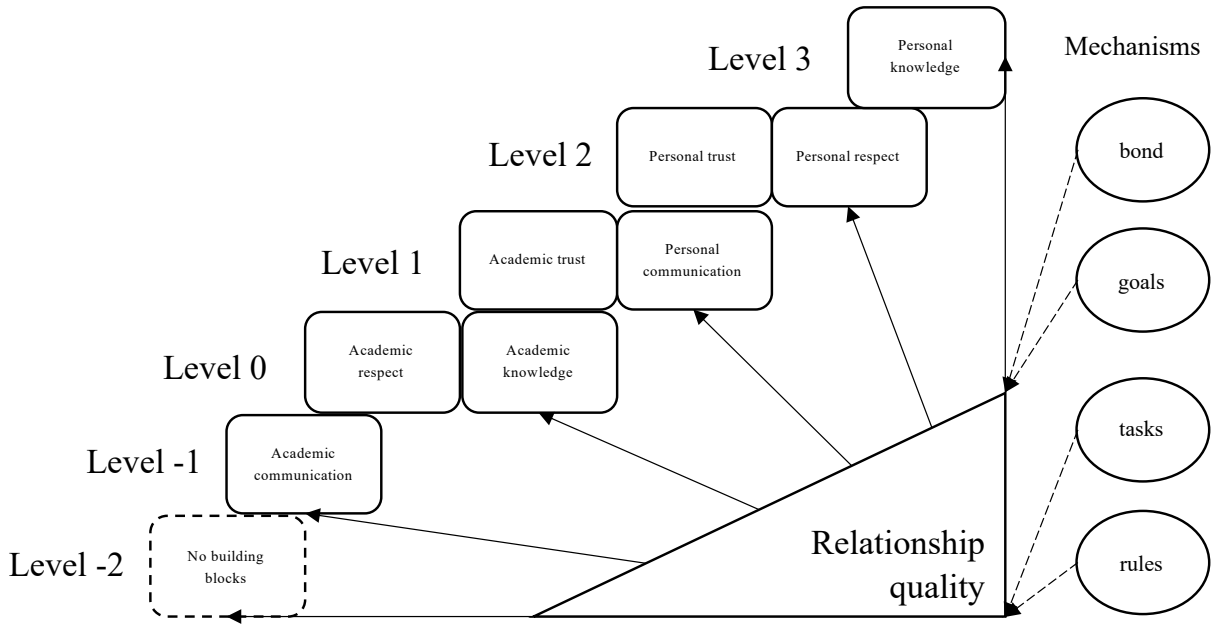
The goal of this study was to develop a conceptual framework of the teacher-class relationship that grasps the teachers' relationship experiences with a class and its effects on

teachers. In doing so, we advance research on teachers' relationships with students by extending the existing models of teacher-student relationships to a conceptualization of the relationship between one teacher and an entire class. To develop this conceptual framework, we conducted cognitive interviews with teachers to investigate their everyday experiences with their classes. We analyzed the interviews following the guidelines of grounded theory to inform our theoretical understanding of the teacher-class relationship and to utilize teachers' knowledge as experienced practitioners. We started the analytical process with the broad question "What is this thing called teacher-class relationship?" and revised and detailed this question with our growing understanding of this relational phenomenon, obtaining three research questions: The first question was which elements define the teacher-class relationship, the second question was which levels can be differentiated regarding the quality of the teacher-class relationship, and the third question was which mechanisms improve the quality of the teacher-class relationship?

Answering these research questions, we present a conceptual framework of the teacher-class relationship that explains the relationship building process between teacher and class (see Figure 2.2).

Figure 2.2

Conceptual Framework of the Teacher-Class Relationship



Method

We conducted cognitive interviews and analyzed them using the guidelines of grounded theory, which allowed us to apply a systematic in-depth analysis of the interview data to build a conceptual framework that is grounded in teachers' experiences. Analyzing qualitative interviews is an established method for gaining detailed insights into teachers' narratives about their relationships with students (e.g. Stuhlman & Pianta, 2002; Veldman et al., 2013) and better understanding their relationship experiences (Aultman et al., 2009; Schutz et al., 2007).

Sample Description

We purposefully selected $N = 9$ interviews out of 56 standardized interviews with teachers from Bavaria, Germany. Teachers were selected aiming for maximum variety regarding the teaching content as well as the representativeness of teachers and their function as home-room or subject teacher. Focusing on teachers' relational experiences with classes in secondary school, the sample encompassed teachers from the three different tracks of secondary schools in Germany as substantive area (Strauss & Corbin, 1994). To achieve a variety of teaching content, we chose teachers who taught different grades of secondary school (from grade 5 to grade 11/12) and a wide range of different subjects (from major subjects in science and language to minor subjects such as religion). Additionally, we selected an equal number of teachers for each school track ($n = 3$ in the lower track, in the middle track, and in the higher track). To ensure representativeness and avoid bias in the interview data, we aimed for an equal distribution of gender (55.5% female) and of home-room versus subject teachers (44.4% subject teachers). For a detailed sample description see Table 2.1.

Table 2.1

Sample Description

Name	Gender	Age	Experience (years)	Track	Grade	Subject	Home -room	Interview length (min)
Martha	f	32	4	Middle	6	English	no	32:16
Marcus	m	36	6	Middle	9	Law & Economy	yes	29:58
Matthew	m	52	19	Middle	10	Mathematics	no	33:52
Lena	f	52	25	Lower	5	History & Social Studies	yes	39:19
Larry	m	60	32	Lower	7	Religion	no	51:29
Lilly	f	30	5	Lower	9	German	yes	44:09
Hannah	f	44	13	Higher	8	English	yes	1:04:01
Heidi	f	64	38	Higher	9	German	yes	36:57
Holger	m	35	10	Higher	12	German	no	42:04

Interview Procedure

In the cognitive interviews, teachers answered thirteen questions about the teacher-class relationship following a standardized interview protocol. The interviews were conducted as part of our scale validation study (see Roza & Frenzel, Study 1), which used newly developed items to operationalize the teacher-class relationship in interview questions. The items had been selected based on an comprehensive literature review, were reformulated to directly address the class as relationship partner, and were phrased as open questions (e.g., “I like this student”, Ang, 2005, p.63, was transformed into “Do you like this class?”). To cover different aspects of relationship quality discussed in literature (Pianta et al., 2012), we asked teachers about their

general impression of the relationship quality or relatedness (e.g., “How is your relationship/rapport with this class?”), how close they perceived the relationship to be (e.g., “Do you feel connected to this class?”, “Can you rely on this class?”) and how conflict-prone they perceived the relationship to be (e.g., “Do you clash with this class?”, “Do you wish you didn’t have to teach this class?”).

For each item, the teachers were prompted to answer the question in a systematic way based on the cognitive answering model (e.g. Willis, 2015), which structures the answering process into four consecutive steps: item comprehension, information retrieval, judgement, and response. Scripted prompts were used to guide teachers’ answers through the four steps and to encourage them to think aloud. For each item, teachers were asked to describe their item comprehension, to elaborate on the information they retrieved from memory to rate the item on a 7-point scale for a specific class, and to explain their judgement by asking them to describe a differently rated scenario. This structured interview procedure allowed teachers to provide detailed descriptions of various situations illustrating their perceptions and evaluations of their teacher-class relationships. Furthermore, the question technique minimalized interferences of the interviewer avoiding confounded answers and enabled us to uncover teachers’ points of view without taking common meanings of any relationship-related terminology for granted (Charmaz, 1990). For item formulations, item order, and prompts see Table 2.2.

Table 2.2

Interview Questions

Interview Questions		
Relatedness	Closeness	Conflict
1_How is your **relationship** with the class?	4_Do you feel **connected** to this class?	5_Do you have **problems** with this class?
2_How do you **deal** with this class?	6_Do you **trust** this class?	7_Do you **clash** with this class?
3_How is your **rapport** with this class?	8_Do you **like** this class?	9_Do you feel **rejected** by this class?
	10_Do you **rely** on this class?	11_Do you wish you **didn‘t have to teach** this class?
	12_Do you feel **respected** by this class?	13_Does this class get on your **nerves**?
Interview Prompts		
1st What does this [item] mean to you?	2nd Can you explain your rating/ Can you give an example for your rating?	3rd How would it be like if you rated this [item] higher/lower?

Grounded Theory

We chose grounded theory to analyze teachers' experiences of their teacher-class relationships for three reasons. First, going beyond description, this method enabled us to explain the social phenomenon of the teacher-class relationship. By deriving theoretical concepts from the interview data (Charmaz, 1990, 1996; Corbin & Strauss, 1990), we developed a conceptual framework on the level of teachers' mental representations of their teacher-class relationships. Second, grounded theory provided us with the methodological strategies to study the dynamic and interpersonal processes inherent to the teacher-class relationship. Explaining social processes (Charmaz, 2008; Corbin & Strauss, 1990), we were able to reflect on the bidirectional processes between teacher and class within the emerging framework. Third, evolved grounded theory

accounts for the contextual factors that shape the social phenomenon under investigation (Charmaz, 2011; Corbin & Strauss, 1990). Integrating the influences of the school context in our analysis, we could take into account how the academic setting affected teacher-class relationships.

We adopted Charmaz's constructivist perspective on the strategies of grounded theory (Charmaz, 1990, 1996, 2008, 2011) because we assumed that teachers construct their relational experience depending on how they perceive and make meaning of their daily interactions with classes. Furthermore, we took on an active and constructing role in that we applied our analytical reasoning and scientific knowledge to analyze the teachers' narratives (Charmaz, 1990).The analytical process of developing the conceptual framework was open and solely guided by the data and the systematic procedure of grounded theory. Thus, our theoretical sensitivity in terms of our knowledge about teacher-student relationships as a closely related, yet different field of research from teacher-class relationships did not restrict, but inform the analytical process (Charmaz, 2008).

Analytical Process

The data analysis following grounded theory is a systematic, iterative process in which the researcher constantly switches between interview data and conceptual work to develop progressively more abstract concepts which synthesize and explain the social phenomenon of interest (Charmaz, 1990; Corbin & Strauss, 1990). This process ensures that the emerging framework is rooted in the empirical data, that is the abstracted concepts are directly built upon the data and are checked and refined by gathering further data in the interviews (Charmaz, 1996). The analytical process encompasses several steps: coding the data, identifying emerging concepts, defining these concepts and their properties, establishing their theoretical connections,

and integrating them into a framework (Birks & Mills, 2015; Charmaz & Mitchell, 2001). After each step that renders the analysis more analytical, the researcher revisits the data, verifies the emerging concepts, and resumes data collection on more theoretical grounds (Corbin & Strauss, 1990). In our study, we sampled instances that illustrated teachers' relationships with their classes and the conditions and consequences of their interaction (Corbin & Strauss, 1990). Thus, our data collection proceeded to specify and organize the diverse range of relational instances that teachers described and to explain the similarities and differences of teachers' relational experiences.

Several analytical strategies are essential to identify the inherent, yet theoretical concepts and the underlying patterns of the data while staying grounded in the data (Charmaz & Mitchell, 2001). These strategies are constant comparison, memo writing, theoretical sampling, and theoretical saturation (e.g. Birks & Mills, 2015; Charmaz, 2008). We used constant comparison as central strategy to derive theoretical concepts from our initial line-by-line coding of the interviews (Strauss & Corbin, 1994), by comparing codes, their incidences, and the emerging concepts with each other, and doing so within and across interviews. We continuously wrote analytical memos to elaborate the definitions of our emerging concepts and to establish their properties and the conditions under which they develop and change (Charmaz, 2008). Through theoretical sampling, that is systematic data collection to refine the concepts along theoretical considerations (Charmaz, 1996), we validated the abstracted concepts and complemented their properties within the interviews (Corbin & Strauss, 1990; Strauss & Corbin, 1994). We reached theoretical saturation in terms of fully elaborated concepts (Charmaz, 1996) when systematic comparisons across the interviews revealed repeated evidence for the concepts and their

properties. Drawing theoretical connections between the concepts and their conditions of development, the core category emerged as essential underlying process which explained most variation in the different relational instances (Corbin & Strauss, 1990). By connecting the abstracted concepts with the relationship building process as core category, we deduced different levels of relationship quality and integrated all parts into a conceptual framework.

After completing the conceptual analysis, we compared the framework developed from the empirical data to our theoretically derived understanding of the teacher-class relationship (Charmaz, 1990, 1996). We established links between the empirically developed concepts of the framework and the defining aspects of the teacher-class relationship that were based on models of teacher-student relationships, thus placing the framework within the existing body of research on teacher-student relationships.

Results

Conceptual Framework of the Relationship Quality Between Teacher and Class

The conceptual framework of the teacher-class relationship explains the underlying process of relationship building between teacher and class. It describes four building blocks of the teacher-class relationship that differentiate the relationship quality on six distinct levels. Additionally, four mechanisms facilitate the development of the building blocks and thereby improve the quality of the teacher-class relationship. Moreover, the framework builds on the characteristics of teacher-student relationships in that it takes into account i) the teachers' perspective on their relational experiences (mental representations; temporal aspect), ii) the interactions between teacher and class (bidirectional processes; personal aspect), and iii) the different professional roles of teachers (influence of the school context; academic aspect).

Building Blocks of the Teacher-Class Relationship

We identified four main building blocks (relational concepts) constituting the teacher-class relationship: respect, trust, communication, and knowledge. Teachers and their classes want to be respected and trusted; likewise, they should respect and trust one another. Relationship partners are satisfied when both talk and listen and when both share information with each other. In accordance with the theoretical understanding of teachers' relationships with students, the empirically grounded building blocks share the three postulated characteristics of teacher-student and teacher-class relationships. Each building block develops over time (temporal aspect) and has not only a personal but also an academic facet (personal and academic aspect). Furthermore, respect, trust, communication, and knowledge are abstract mental concepts that involve bidirectional processes between teacher and class and facilitate the feeling of being connected with one another for both relationship partners within the boundaries set by the school context. When the relationship develops and teacher and class grow closer, more building blocks evolve and develop both facets (personal and academic). When the relationship quality decreases and unfavorable patterns of interaction emerge, the building blocks disappear simultaneously. The personal facet of each building block describes interactions between teachers and class that promote personal contact and exceed the requirements of the academic setting. The academic facet of each building block describes the social interaction between teacher and class that is required by the hierarchical class context and is shaped by teachers' professional roles. Thus, the academic facet must be developed before the personal facet can be built. For interview quotations describing the two facets of each building block (respect, trust, communication, knowledge) see Appendix A.

Respect. Respect is an essential building block for relationships and social interactions. Teachers explicitly differentiate between academic and personal respect underlining the two facets of this building block:

> There are two sides: One is professional, that they perceive me as a professional authority who has the expertise. And the other is personal respect, that they have respect for me as a human being because of what I am, what I represent, my demeanor, so my teacher personality. (Holger, 12[4])

Academic respect is typically expected to be pre-existing given the school context and the professional roles of teachers as authority and leader. The academic facet of respect reflects if students follow teachers' rules during lessons and the social rules in school. Respectful students accept their duties as class members and novices as well as the teachers' job-related tasks. Personal respect is linked to approving the different needs and personalities of both parties. Teachers and students feel respected as a person when their individual traits and personal difficulties are taken seriously and will be recognized. Teachers show respect for instance by adapting students' homework or test schedule to their overall workload or acknowledging the struggles students have as adolescents. Students are more likely to show respect when teachers facilitate their learning and teachers appreciate it when students see these efforts. Respect grows over time and with the efforts of both sides.

Trust. Trust is an important building block of the relationship between teacher and class because it is vital for all relationships. Teachers refer to the concept itself, its variety of behavioral aspects in the school context, and its relevance for both sides: "Yes, that students

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[4] Interview quotations are cited as "teacher name, item number"

don't want to confide in the teacher, can't talk about different things, can't confide their worries and fears, both about the subject and about the class or the environment" (Martha, 3).

The academic facet of trust covers aspects that range from basic lesson requirements to discussing internal class matters with the students. For students, academic trust reflects the degree of assurance they feel towards the teachers' willingness and competence to help them learn and perform. Therefore, the teachers' role as expert is in the focus, whereas personal trust focuses on teachers as mentors and contact persons. When students share personal experiences and feelings with the teachers and talk openly about their problems, teachers know they are trusted beyond school matters. On the other side, teachers trust their students on a personal level when they share anecdotes of their private life and count on students' discretion. Gaining trust in each other takes time.

Communication. Communication as building block of the teacher-class relationship encompasses not only that teacher and class are communicating, but the way how they are talking to each other. It comprises the way how teachers can convey the subject matter and how teachers and students can connect and talk on a personal level:

> I want to reach them on the same wavelength as they are, with what I say or what I address them about. It doesn't necessarily always have to be something that … like learning content, but if you also [...] address a more sensitive topic. (Lena, 3)

Academic communication is characterized by its one-way direction from teachers to students where teachers try to make students learn and cooperate. Teachers clarify learning requirements and tasks to establish a work basis in line with their roles as leaders and experts. They try to establish a teaching practice which helps them to keep students listening and

engaging in the curricular topics. Personal communication is characterized by the mutual exchange of ideas and thoughts between teachers and students. In terms of a two-way communication, both partners are involved in an open dialogue and give feedback to each other. Students express their wishes and opinions to the teachers and do not talk badly behind the teachers' backs. Compromises or agreements can be found because teachers can adapt to students' needs, when teachers and students engage in such an exchange.

Knowledge. Knowledge as building block is relevant for the interaction during lessons as well as for more personal encounters beyond the lesson time:

> Knowing what is going on with them at the moment. [...] That's to know what's going on inside them at school but also - you never know with everyone - but with some students it's very important to also know what's going on with them privately right now, because quite often you can - there, let's say - trace certain behaviors back. (Holger, 3)

The academic facet comprises knowledge that helps teacher and class to correctly assess the learning situation: students know about the teachers' teaching style and the teachers know about their students' levels of knowledge and performance. Therefore, teachers can adapt the level of difficulty and choose fitting teaching methods that facilitate learning in the class. The personal facet describes that one interaction partner understands the other's affective reactions better because of some background knowledge. Teachers gain insights into the family background of students and their personal struggles talking to different sources (e.g., colleagues and parents). Students can better place their teachers' reactions, even though their knowledge base is more limited regarding their teachers. Accumulating personal knowledge about teachers might also enhance the possibility for students to see them as role models. Knowledge grows

over time as teachers and students get to know each other better over the course of the year and beyond.

Levels of Relationship Quality Defined by the Building Blocks

We distinguished six levels of relationship quality that correspond to the underlying process of relationship building of the teacher-class relationship. The different levels of relationship quality are directly linked to the number of building blocks that are present (see Figure 2.2). At the lowest level of relationship quality (Level −2), no building blocks have developed, whereas at the highest level of relationship quality (Level 3) all four building blocks have developed both facets (personal and academic). Because the academic facet develops first, the lower quality levels are characterized by the number of academic facets that are present and are typical for difficult interactions between teachers and class. The higher quality levels are characterized by the number of personal facets that are present and are typical for positive interactions between teachers and class.

Because the relationship quality depends upon the building blocks that share the characteristics of the teacher-class relationship, the three theoretically derived characteristics also apply to the relationship quality: it develops and changes over time towards more or less favorable interactions (temporal aspect). Additionally, a more affectionate and personal connection (personal aspect) and a more successful role-enactment of teachers (academic aspect) characterize a high-quality relationship. In the following, the characteristics of the quality levels are described in more detail. For interview quotations see Appendix B.

Level 0: Basic Relationship. This level depicts the baseline of relationship quality because teachers expect this level to be the starting point when interacting with a class. Three out of four academic facets are present, only academic trust is missing. No personal facets of the building blocks are developed yet, so the interaction is determined by the academic setting. A basic relationship is mainly characterized by academic respect, academic knowledge, and academic communication. This means that teachers are respected because of their professional role but teacher and class are not interested in each other, and that the exchange between teacher and class is limited to subject-related matters. Teachers concentrate on their teaching task and leave private matters aside. Teachers fulfil their teaching role as leaders, but there is no personal connection between the teacher and the class.

Starting from the basic relationship level, teachers and class can either move towards less pleasant and negative or more pleasant and positive interactions. This decrease or increase in relationship quality depends on the disappearance or development of the building blocks.

Negative Relationship Quality. When less favorable patterns of interaction develop between teacher and class, the academic facets of the building blocks disappear, and the relationship quality declines.

Level −1: Bad relationship. This level illustrates the decline of the relationship quality from neutral to negative, as only one building block with its academic facet (academic communication) is still present. Teachers call classes on this level “difficult” and know several of these classes. A bad relationship is mainly characterized by academic communication, that is discussing learning requirements and instructions. As students need strict directions to follow the lessons, teachers have to frequently intervene and take measures, which reduces the actual

teaching time. Teachers enact their role as authority and impose restrictions and consequences on the class to ensure their lessons.

Level −2: Very bad relationship. This level describes the deterioration of the teacher-class relationship. It occurs rarely, but most teachers have experienced this level once in their career. Teacher and class do not find common grounds for peaceful coexistence as there are no building blocks present anymore. Teachers are guarded and wary of the class and expect to have conflicts or fights with the students. Respect and trust are lacking between teachers and students. Students seem to be indifferent towards teachers' roles and leave teachers without any starting point for communication or knowledge. Thus, teachers can't accomplish their teaching tasks and struggle to fill in any professional role.

Positive Relationship Quality. Teacher and class may also move towards more pleasant and positive interactions. This increase in relationship quality emerges with the development of the personal facets of the building blocks that build onto the already existing academic facets.

Level 1: Good relationship. This level represents a relationship quality that is notably positive, even though it can still be improved. Teachers are more or less content with this level as all building blocks have developed their academic facet and personal communication adds a more personal touch. Academic trust completes the academic requirements for teaching and the class is willing to get involved in the learning opportunities provided by the teacher. Furthermore, students engage in conversations with the teacher and give feedback that can guide further teaching and learning activities. Teachers are acknowledged in their role as expert by the class and students follow teachers' directions.

Level 2: Very good relationship. This level depicts a relationship quality that is characterized by a personal connection between teachers and students. Some teachers aim to reach this level within a school year, whereas others do not expect to reach it with every class. The building blocks trust and respect have developed their personal facet, so that only knowledge has not formed its personal facet yet. Teachers are more inclined to be casual and personal with the class as they trust the students and feel respected by them. They are willing to adapt their lessons to students' needs and make space for non-curricular topics as they have enough insights in students' wishes and interests. Teachers and students share some extra-curricular experiences that provide topics for conversations and the opportunity to connect. Students disclose personal matters with teachers which enables them to take on their role as mentors.

Level 3: Exceptional relationship. This level illustrates a relationship quality that is not often experienced by teachers, but mostly with classes they know already for several years; some teachers don't feel the need to reach this level at all. Personal knowledge distinguishes this level from the lower levels, completing the four personal facets of the building blocks. Teacher and class have a strong personal connection and their conversations include private matters of both relationship partners. On the one hand, teachers can show weakness and are touched by the backstories of students who are in a difficult situation or experience a hard time. On the other hand, students are genuinely interested in teachers and thus, teachers can become role models for their students.

Mechanisms to Achieve High Quality Relationships

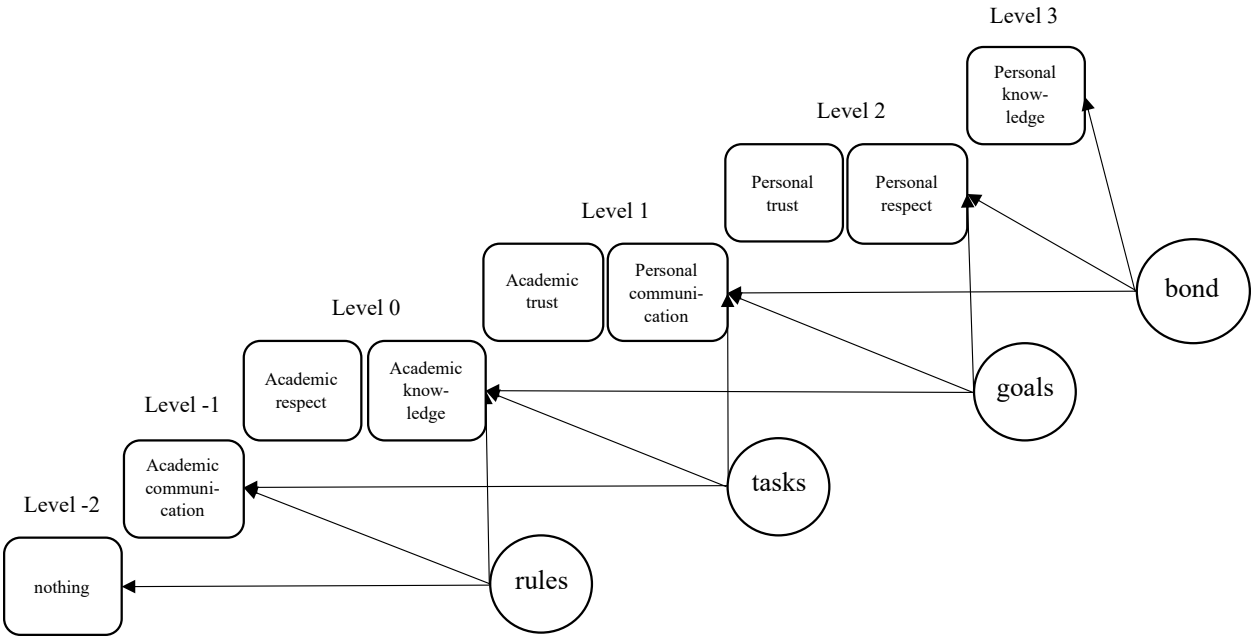
Four mechanisms emerged that influence the teacher-class relationship: creating common rules, establishing common goals, sharing tasks, and developing an affective bond. These

mechanisms encompass different behavioral strategies that foster the development of the building blocks and thus improve the relationship with a class (see Figure 2.3). Teachers mentioned these strategies incidentally when describing the changes in their teacher-class relationships and seem to have some implicit knowledge about their effects.

To facilitate the development of the building blocks, each mechanism aims to evoke negotiations between teacher and class as basic bidirectional process in which the interests of both relationship partners are recognized. For interview quotations describing these mechanisms see Appendix C.

Figure 2.3

The Mechanisms Influencing the Building Blocks of the Teacher-Class Relationship



Mechanisms to Foster Academic Facets

Common Rules. The mechanism *common rules* indicates that teacher and class set and agree on common rules. These standards apply for both parties and refer to manners in social interaction (e.g., friendliness) and lesson regulations (e.g., punctuality). There are mandatory rules to the school context (e.g., respecting others' properties) and specific rules for each classroom (e.g., importance of being honest about missing homework). Furthermore, teacher and class establish consequences that regulate appropriate reactions to misbehavior and are transparent to everybody.

Shared Tasks. The mechanism *shared tasks* describes the process of dividing tasks and responsibilities between both interaction partners. Each party knows their obligations within the relationship and commits to them. Teacher and class agree upon their individual parts of the academic work they must fulfil so that learning can progress (e.g., being prepared for the lessons). Teachers negotiate requirements that are obligatory to the school context (e.g., performance) and those specific to their teaching methods (e.g., active participation in group work).

The two mechanisms *common rules* and *shared tasks* help to push the lower levels of relationship quality towards higher levels because they support the development of the academic facets of the building blocks. Implementing these mechanisms initiates a conversation between teacher and class about rules and tasks in the school setting and thus, academic communication arises. Academic respect develops when both parties comply to social manners and appropriate behavior by establishing common rules and fulfil their duties regarding teaching and learning as shared tasks. Academic trust is more likely to develop when school regulations are followed, as disregarding rules reduces the trustworthiness of the misbehaving relationship partner.

Additionally, fulfilling assignments and heeding boundaries implies that the interaction partner is trustworthy. Academic knowledge increases when teachers and students negotiate rules and adjust reciprocal expectations about their respective tasks. In sum, lower levels of relationship quality can profit from common rules and shared tasks as they help create a shared understanding of a feasible way of working together. These mechanisms are often mentioned by teachers in terms of a deficit that negatively influences the relationship. In contrast, the following two mechanisms *common goals* and *shared bond* are only mentioned by teachers as improving the relationship quality.

Mechanisms to Foster Personal Facets

Common Goals. The mechanism of common goals is mostly highlighted by teachers teaching a graduating class. To explain the quality of their relationship they refer to the agreement they made with the class to reach a certain academic goal (e.g., finishing a degree). Similarly, this mechanism encompasses the idea of negotiating a working direction so that teachers and students are equally invested in a joint objective.

Shared Bond. The mechanism shared bond underlines the affective component of the relationship, which is desirable for a personal connection between the interaction partners. This mechanism involves sympathy and empathy as responses; thus, teachers talk mostly about their own experience of feeling a bond towards students. They acknowledge and accept similarities and differences between their personalities and the students' character traits. Furthermore, they seek to understand students, are interested in their development, and therefore feel a personal connection to them. This connection helps teachers to see the unique strengths of students and integrate them into lessons or other activities in the school setting.

The two mechanisms *common goals* and *shared bond* are relevant for higher levels of relationship quality because they foster the development of the personal facets of the building blocks. Therefore, the mechanisms begin to kick in when the academic facets of all building blocks are developed, and personal communication is growing. Personal trust is fostered through the discussion of work-related incentives, which gives both parties the opportunity to disclose personal wishes and individual struggles regarding the learning goals. Additionally, feeling acknowledged as a person can weaken reservations and strengthen the basis for personal trust in the relationship. Personal respect can be facilitated in an open discourse about goals when personal opinions and ideas of teachers and students are taken into consideration. When teachers are interested in students' personal progress and feel a connection with them, students feel acknowledged, which increases their feeling of personal respect. Personal knowledge increases when negotiating goals and establishing a connection creates occasions for teachers and students to look past the academic duties and responsibilities. In sum, the two mechanisms can further improve positive levels of relationship quality and boost the personal dimension of the teacher-class relationship.

Discussion

Teacher-student relationships are important for teachers and recent research underlined the relevance of teachers' relationships with the students of a class for teachers' emotional wellbeing. Even though multiple theoretical approaches exist that study teacher-student relationships, a framework that specifically conceptualizes the teacher's relationship with a group of students is yet needed. Introducing the *teacher-class relationship* as relationship between one teacher and a class as specific group of students, we developed a conceptual

framework of the teacher-class relationship that provides a conceptual, yet empirically based explanation of this relational phenomenon. To develop a framework that is based on the narratives of teachers as experienced practitioners, we followed the analytical process of grounded theory and systematically tested and revaluated our conceptualization against the interview data. In addition to the methodological rigor of our framework development, we were able to link the abstracted concepts with current research on teacher-student relationships and to connect the teacher-class relationship to teachers' emotional wellbeing.

Comparing our conceptual framework with existing literature about dyadic teacher-student relationships, we found evidence confirming the importance of our proposed building blocks (respect, trust, communication, knowledge) for positive teacher-student relationships. The building block respect is often discussed as an ingredient of teacher-student interactions that provides a positive motivational classroom climate (e.g. Bieg et al., 2011; Patrick et al., 2011), but is also defined as integral part of adolescents' sense of relatedness (e.g. Goodenow, 1993). The building block trust is discussed as an important ingredient of dyadic relationships in school (Bryk & Schneider, 2002), including teachers' trust in students and students' trust in teachers (Schulte-Pelkum et al., 2014; Tschannen-Moran & Hoy, 2000; van Maele & van Houtte, 2011). In a study about students' wellbeing, teachers described wellbeing in relational terms and stressed the importance of the building blocks communication and knowledge (Thomas et al., 2016). In a similar vein, teachers' descriptions of positive teacher-student relationships involved their contact to students outside the classroom in which they communicated with students about informal topics and students' needs (Claessens et al., 2017). Furthermore, an intervention study

showed that increasing teachers' knowledge about students in terms of their similarities with them improved the relationship between teacher and students (Gehlbach et al., 2016).

Beyond developing an understanding for the building blocks of the teacher-class relationship, our proposed framework provides further insights into the connection between teacher-class relationships and teachers' emotional wellbeing because it links the concepts of teacher emotions and classroom functioning to the quality of the teacher-class relationship.

Links to Teacher Wellbeing and Classroom Functioning

„I think our job is to teach the subject matter and if the relationship with the class is not right, then this goal is also at risk" – Lilly, stressing the importance of relationship quality for teaching subject matter.

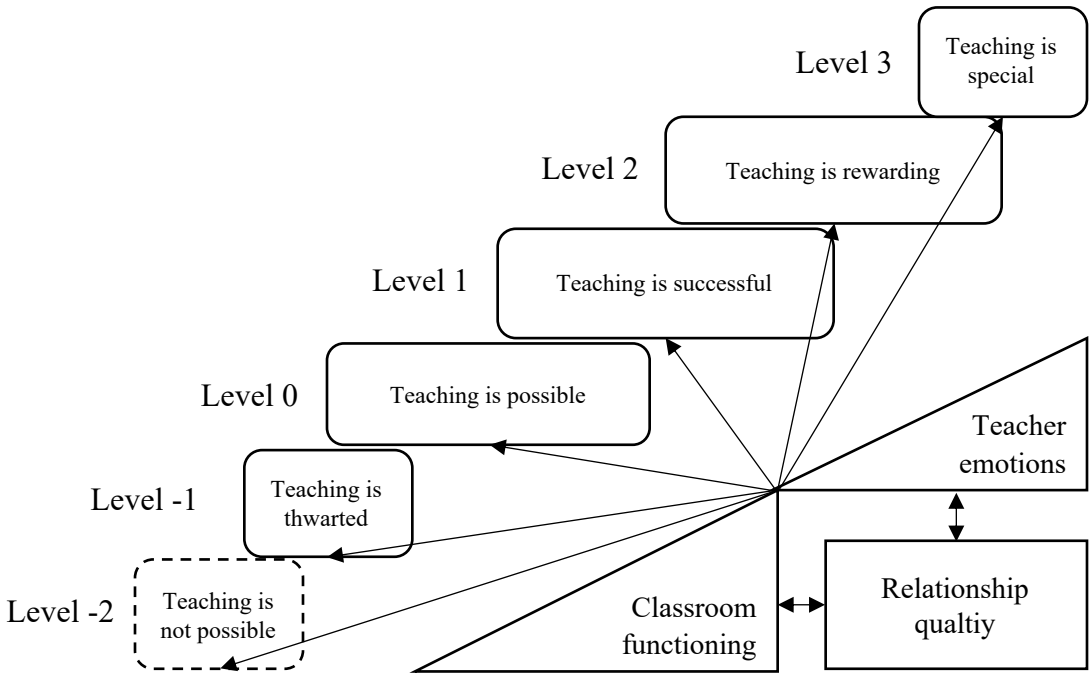
In our interview data, teachers connected the quality of their teacher-class relationship to the overall functioning of the classroom (e.g., successful classroom management) and to their emotions. The connections between teacher-student relationships, classroom management, and teachers' emotional wellbeing have already been discussed in literature. Several models of the teacher-student relationship have been extended to include classroom management in their frameworks because it is intertwined with teachers' relationships with students: the way how teachers interact with their students in the classroom shapes not only how they relate to them but also how they manage their students' behavior (Davis et al., 2012; Pianta, 2006; Wubbels et al., 2014). Thus, the interaction between teachers and students can be described from two perspectives: a relational and a classroom management perspective. Adding to this twofold perspective, teachers perceive and judge their students' behavior in terms of their mental representations of the relationship and in terms of their teaching goals, whereby both appraisal

processes evoke emotions in teachers (Frenzel, 2014; Spilt et al., 2011). Especially the perception of students' misbehavior causes negative emotions in teachers because dealing with misbehaving students obstructs their instructional and management goals (Chang & Davis, 2009). Additionally, teachers' perception of students' behavioral problems is associated with their judgment of a more negative teacher-student relationship (Aldrup et al., 2018b). Thus, teachers interpret their students' behavior regarding the relationship quality as well as regarding the classroom functioning, (i.e., goal-conduciveness of students' behavior) and these interpretations are linked to their emotions.

In line with this field of research, the teachers in our study described their interactions with students from a relationship perspective, but also from a classroom management perspective. They underlined that relationship building is an integral part of classroom functioning and that it influences their daily emotional experiences. Given these findings, we linked classroom functioning and teacher emotions to the different quality levels of the teacher-class relationship demonstrating the connection between relationship quality, teachers' emotional experiences, and the overall functioning of the classroom (see Figure 2.4). For interview quotations see Appendix D.

Figure 2.4

The Quality of the Teacher-Class Relationship, Teacher Emotions, and Classroom Functioning



Levels of Teacher-Class Relationship Quality

Level −2. Teaching is not possible. "Then I would go into the class with a tension, then I would have no understanding of the students at all because our foundation would be completely missing" (Hannah, 11). No building blocks (i.e., respect, trust, communication, and knowledge) are present. Teachers have the feeling that teaching the class is a fight and this battle is reflected in the poor performance of students. They feel out of control and powerless because students seem to be elusive. The opposition against the teacher is noticeable in the classroom.

Level −1. Teaching is thwarted. "That everything only works with extreme pressure and that ... yes, with extreme pressure from the teacher and then the students don't have so much fun learning either" (Martha, 1). Academic communication is possible. Teachers struggle with creating the conditions to teach and the tension between teacher and class hinders teaching and learning. Teachers spend a lot of time and effort to manage students' behavior and feel like their teaching efforts do not pay off, which is frustrating to them.

Level 0. Teaching is possible. "That they just sit there and do their time. Maybe they learn once at the most, to be prepared for an examination or something, but on the whole, they're not interested" (Matthew, 2). Academic respect and academic knowledge start to develop. Teachers feel in control and teaching "works" in the class, but teachers have to be present and alert the whole time. They continuously monitor the students and their learning activities. Teachers focus on conveying the necessary subject matter because students seem to be unmotivated and need teachers' support to overcome their reluctance to learn.

Level 1. Teaching is successful. "The lessons can take place normally without any disturbances and at the same time [...] you can build up a good relationship with the students" (Lilly, 8). The academic facets of all relationship building blocks are present, personal communication starts to develop. Teacher and class work together, so that lessons and learning can progress. Teachers are able to try and choose different teaching methods and students accept these choices. Furthermore, teachers can exert less control and slacken the reins in class. They are satisfied with their teaching efforts.

Level 2. Teaching is rewarding. "Because in the meantime we can laugh more together and I think we enjoy the lessons more, so of course you also work more intensively since things are going better, but you also have joy in the meantime" (Martha, 1). Personal trust and personal

respect start to develop. Teacher and class are personally engaged in the learning process and enjoy the lessons. Together with the class, teachers can exchange thoughts and ideas and lessons become a joint effort. Teaching gets less teacher-centered because teachers are open and curious about what students contribute to the lessons. Teachers and class find common ground, so that teachers look relaxed towards challenges.

Level 3. Teaching is special. "[That] our relationship is already so settled [...] that suddenly the lessons become a lot more interesting because people are revealing a lot more and so am I" (Hannah, 3). Personal knowledge starts to develop. Teacher and class mutually appreciate each other and find a personal connection. Teaching and learning are enriching for both. They get to know each other in different circumstances beyond the lessons and feel acknowledged as individuals apart from their roles. Teachers feel embedded in the class and as a part of the group.

Limitations and Further Research

To evaluate the scope of our newly developed conceptual framework of the teacher-class relationship, certain limitations should be considered. Even though the selection of the interviews was based on specific criteria, the teachers were part of a convenience sample. Thus, the interviewed teachers were most likely subjectively successful teachers with overall positive relationships as they were willing to disclose details about their relationship experiences. Adding to a potential bias, we analyzed the teachers' mental representation of the teacher-class relationship based on their narratives and these self-reports are likely to be distorted by teachers' ideals of positive relationships (e.g. Wubbels et al., 1992). The emergence of the negative levels of relationship quality, however, speaks to the fact that we were able to grasp a broad spectrum of teachers' relational experiences, including less-than-ideal and difficult relationships.

Second, by interviewing a variety of teachers with different years of teaching experience, we merged their individual relational experiences to gain a complete picture of the variations in relationship quality. Thus, we focused on the general process of relationship building independent from teachers' individual characteristics such as their years of experience. Yet, research showed that the quality of teacher-student relationships changes over the course of the teaching career (e.g. Veldman et al., 2013), therefore requiring further research to disentangle the differential effects of age, gender, and teaching experience on the quality of teacher-class relationships.

Third, the generalizability of our newly developed framework to other teaching contexts such as teaching in higher education is limited, although the generalization of the relationship building process goes beyond the experiences of the interviewed teachers due to the methodological rigor of the grounded theory approach. In our framework, we did not account for the contextual differences between primary and secondary schools, which certainly influence teachers' relational experiences (e.g. Hargreaves, 2000). The teacher-class relationship might be less central in primary schools because teachers have more time to interact with the individual students, accentuating the dyadic teacher-student relationships (e.g. Roorda et al., 2017; Sabol & Pianta, 2012).

Finally, focusing on teachers' relationships with the class as specific group, it was not within the scope of our study to analyze the dynamics between teachers' dyadic relationships with individual students in the class and the teacher-class relationship, which seems to be an interesting and promising avenue for future research. First findings already showed that comparing the quality of different dyadic relationships of one person yields new insights into the

person's emotional wellbeing (Martin & Collie, 2018; Milatz et al., 2015), underlining the relevance of different conceptualizations of teachers' relationships with their students.

Conclusions and Practical Implications

To capture teachers' relational experiences with a whole class, we introduced the teacher-class relationship and developed a conceptual framework that describes the relationship building process between a teacher and a class of students. The teachers' narratives proved that the teacher-class relationship is an actual social phenomenon in the classroom that has significant effects on teachers' teaching experiences. The link between teachers' emotions and the quality of the teacher-class relationship corroborates the findings that teachers' emotional wellbeing is linked to their relationships with students (Klassen et al., 2012; Spilt et al., 2011). Furthermore, the emergence of the relationship building process underlines the importance of creating and maintaining good relationships as implicit task of teachers – not only to promote students' academic development (Pianta & Allen, 2008; Sabol & Pianta, 2012), but also for their own wellbeing (Virtanen et al., 2019). Thus, providing teachers with information and orientation of how to navigate the relational processes with their classes should be part of pre-service and in-service teacher trainings to enable teachers to improve their teacher-class relationships.

We think that our empirically grounded framework could be a helpful tool for teachers to reflect on their relationships with classes and potentially improve them. Based on the interviews of teachers, the framework describes teachers' everyday experiences from their perspective and thus is an easily accessible and plausible heuristic for them to gain insights into their teacher-class relationships. The individual elements of the framework can stimulate and guide teachers' reflection and make their implicit knowledge and mental representation of the relationship

explicit and available to them. Such systematic reflection can be a promising avenue to help teachers develop and improve teacher-student relationships by becoming aware of their perception of and interaction with students (Newberry & Davis, 2008; Spilt et al., 2012).

With the ultimate goal of facilitating good relationships between teachers and students as a source of positive emotions and wellbeing for both, we hope that the newly developed framework inspires future research to investigate teacher-class relationships in more detail and from multiple perspectives.

4. General Discussion

The quality of their relationships with students plays an important role in teachers' daily teaching experiences. Teachers in secondary schools teach several classes each day and the class as a specific group of students is a salient point of reference for them. It seems very plausible that teachers perceive the class as relationship partner and that relationships develop between teachers and classes, called teacher-class relationships. There is evidence that the relationship with the students of one class influences teachers' emotions and wellbeing, but a comprehensive approach that describes teacher-class relationships is yet missing. The main goal of this thesis was to investigate teacher-class relationships from a teachers' perspective and the overarching research question was: "How do teachers experience their relationships with the classes they teach (i.e., their teacher-class relationships) and how do these relationships affect them?". To capture the relational processes between teacher and class, the new construct teacher-class relationship was defined and systematically explored. Two empirical studies were conducted to gain insights into teachers' relationships with their classes and to answer each of the two specific

research questions: “How can we measure the teacher-class relationship?” and “How can we conceptualize the teacher-class relationship?”.

In the first study, an instrument that measures the teacher-class relationship via teachers’ self-reports was developed. Qualitative and quantitative validation showed that the quality of teacher-class relationships can be reliably and validly measured with the new TCR scale. The validity of the scale is furthermore supported by the positive correlations with teachers’ enjoyment, self-efficacy beliefs, and emotional labor, and its negative correlations with teachers’ anger, anxiety, and self-reported burnout symptoms. In the second study, a conceptual framework of the teacher-class relationship was developed using a grounded theory approach. Findings describe the teacher-class relationship as relationship building process that manifests on different levels of relationship quality. The relationship between teacher and class builds on mutual *respect*, *trust*, *communication*, and *knowledge*. Furthermore, the analysis showed that the quality of the teacher-class relationship is linked to teachers’ emotions and their teaching experiences (i.e., perceived classroom functioning).

The findings of both studies prove that the teacher-class relationship is a meaningful concept in itself and underline the importance of teacher-class relationships for teachers. Investigating teacher-class relationships seems to be a promising approach to explain teachers’ emotional wellbeing and their teaching experiences. The quality of the teacher-class relationship might help explain intraindividual differences in teacher variables on the class-level, such as their emotions and self-efficacy during teaching a specific class. Teaching experiences and teaching emotions might depend on the level of relationship quality that develops between the teacher and a class and is influenced by characteristics of the class, such as class-specific norms of interpersonal and learning behavior. Additionally, the quality of teachers’ relationships with

the classes they teach might predict differences in teacher variables on a more general level, such as teachers' burnout and job satisfaction. Poor teacher-class relationships are a source of repeated negative emotions and undesired teaching experiences that subsequently impede teachers' goal achievement and decrease their wellbeing.

Above and beyond linking relationship quality to teacher outcomes, the findings provide valuable insights into the nature of the teacher-class relationship. Integrating the findings of both studies, the teacher-class relationship comprises two aspects: an academic aspect that describes the quality of interactions focusing on lessons and subject matters and a personal aspect that describes the quality of interactions mainly outside lessons and beyond subject matters. The academic aspect is associated with teaching and discipline in the classroom, as shown by the peripheral codes (teaching, discipline, and information from third parties) in Study 1 and is reflected in the academic facets of the building blocks (academic respect, trust, communication, and knowledge) in Study 2. Combining peripheral codes and academic facets, the academic teacher-class relationship manifests when teacher and class show respect by being prepared for the lessons, trust in the capabilities and compliance of each other, communicate to maintain orderly and undisturbed lessons, and know the teaching and learning conditions of the classroom. The personal aspect is associated with the affective and interpersonal connection between teacher and class, as shown by the core codes (affect, togetherness, knowing each other, and personal exchange) in Study 1 and is reflected in the personal facets of the building blocks (personal respect, trust, communication, and knowledge) in Study 2. Combining core codes and personal facets, the personal teacher-class relationship manifests when teacher and class respect personal characteristics and needs, confide private matters in personal exchange, engage in turn-taking in their communication, and show interest in each other by acquiring knowledge about each other

(i.e., during extracurricular activities). These findings corroborate with research that described different dimensions of teacher-student relationships in school and in university (Hagenauer & Volet, 2014; Kemna, 2012; Reeve, 2006). Based on their literature review, Hagenauer and Volet (2014) argued that teacher-student relationships in higher education have two dimensions that pertain to the interpersonal-affective and the professional-supportive nature of these relationships. They argued that the quality of both dimensions influences the teaching and learning quality affects students and teachers, and thus, has practical relevance for teachers and policy makers. Describing teacher behaviors that nurture students' motivational resources, Reeve (2006) discussed the relevance of positive teacher-student relationships in terms of attunement and relatedness as well as supportiveness and gentle discipline. He underlined that teachers can learn these affect-related and teaching-related strategies to provide students with high-quality relationships. To measure personal teacher-student relationships, Kemna (2012) presented a new, two-dimensional instrument of which one dimension covers teachers' behaviors and the other dimension focuses on the level of sympathy between teacher and student. He suggested that students' individual responses to teachers' relational efforts play an important role in the relationship building processes and might explain differences in the overall relationship quality.

Taken together, the teacher-class relationship is of a dialectic nature that incorporates a personal-affective and a work-related aspect and includes teacher and class as active relationship partners that mutually influence each other. Given the significant role that teacher-class relationships play in teachers' lives, the link between the quality of teachers' relationship with their class and their wellbeing became apparent in this thesis.

The Teacher-Class Relationships and Teachers' Wellbeing

The teacher-class relationships can be integrated into the growing research field that investigates the effects of teacher-student relationships on teachers' emotional and professional wellbeing (Aldrup et al., 2018b; Milatz et al., 2015; Taxer et al., 2019; van Droogenbroeck et al., 2014; Virtanen et al., 2019). To understand the link between the teacher-class relationship and teachers' wellbeing, it is important to consider its associations with i) overall classroom functioning, ii) teacher emotions, and iii) teacher identity.

Link With Classroom Functioning

In both studies, teachers underlined the interconnection between the quality of the teacher-class relationship and the overall functioning of the classroom. In the interviews teachers referred to classroom functioning in terms of how lessons could proceed and how they were able to manage students' behaviors. They described that the quality of the teacher-class relationship was closely related to how they could work together with the class and proceed with teaching and learning matters. In the questionnaire-based survey, the quality of the teacher-class relationship was significantly correlated with teachers' class perceptions in terms of students' motivation, discipline, and achievement level in this class[5]. These findings are in line with research that discussed the interplay between the quality of teacher-student relationships and classroom functioning in terms of classroom management (Davis et al., 2012; Pianta, 2006; Wubbels et al., 2014). Pianta (2006) and Wubbels and colleagues (2014) argued that classroom management can be reconceptualized in terms of teacher-student relationships and advocated for

[5] The correlations between the TCR score and teachers' class perception were not reported in Study 1.2. For details see Appendix E.

a relational perspective to describe classroom processes. Focusing on the interpersonal aspect of classroom management, Wubbels and colleagues (2014) aligned classroom management with teacher-student relationships and considered both constructs as describing teachers' action to create a supportive learning environment. Understanding the classroom as social system, Pianta (2006) broadened the behavioral perspective on classroom management as set of specific strategies to include the socio-emotional aspects of teacher-student interactions. In their book "An interpersonal approach to classroom management", Davis and colleagues (2012) redefined classroom discipline as shared responsibility of teacher and students and stressed the importance of good teacher-student relationships for successful classroom management. Furthermore, a study by Mainhard and colleagues (2011) showed the lasting negative effect of teachers' coercive classroom management behavior on relationship quality because it decreases the proximity between teacher and students. The connection between the teacher-class relationship and classroom functioning is also supported by the link between caring relationships and creating a supportive learning climate (see paragraph on Teacher Care).

Overall, it can be concluded that the link between the teacher-class relationship and the overall functioning of the classroom is supported by the findings of the present thesis and previous research that discussed the role of high-quality teacher-student relationships for successful classroom management. Similarly, the link between the teacher-class relationship and teacher emotions has been investigated by previous research on teacher-student relationships, teaching goals, and perceived student behavior.

Link With Teacher Emotions

In both studies, teachers associated the quality of their relationship with a class with the emotions they experienced during teaching. In the interviews, they described that teaching was

more fun and less strenuous and that they enjoyed meeting students of the class when their relationship with the class was good. In the questionnaire-based survey, teacher emotions were significantly correlated with the quality of the teacher-class relationship in theoretically coherent ways (i.e., the better the relationship quality, the more enjoyment, and less anger and anxiety teachers experienced). This link between relationship quality and teacher emotions is supported by research showing that teachers strive to create positive relationships with students and experience more positive and less negative emotions when teacher-student relationships are good.

Adopting an appraisal perspective on emotions, emotions arise as a result of an individual's mostly automatic evaluations of a situation (i.e., appraisal processes) that depend on the individual's needs and goals regarding the situation. Presenting a model of teacher emotions, Frenzel (2014) argued that teachers' perceptions of student behavior and teachers' classroom goals influence their appraisals that subsequently cause teachers' emotions. In her model, Frenzel distinguished four teaching goals that correspond with four broad themes of teachers' perceptions of student behavior: students' performance, engagement, discipline, and their relationship with the teacher (see also Frenzel et al., 2020). Testing the model of teacher emotions, Becker et al. (2015) showed that teachers' joy and anger during teaching depend largely on their subjective appraisals of the goal conduciveness of student behavior for their lessons. Exploring the antecedents of teacher emotions further, Hagenauer et al. (2015) showed that teachers' perceptions of student behavior can be differentiated in terms of teacher-perceived classroom behavior (i.e., students' engagement and lack of discipline) and teacher-perceived relational behavior (i.e., closeness with students) that have different effects on teachers' emotions. Closeness with students was the strongest predictor of teachers' joy, whereas anger

was best predicted by lack of discipline. Adopting an achievement goal framework, Butler (2012) distinguished five goal orientations of teachers that consist of four goals directly derived from motivational theory (i.e., mastery, ability approach, ability avoidance, work avoidance) and a relational goal. She argued that building personal relationships with students is part of teachers' professional role and that teachers' achievement goals are distinct from their relational goal, because only the relational goal predicts their social support for students (Butler & Shibaz, 2014). Based on these findings, it can be concluded that teachers have the goal to build good teacher-student relationships and this relational goal additionally influences their judgments and emotions. Teacher emotions are caused by the way teachers perceive and judge student behavior not only in relation to their instructional and management goals, but also in relation to their relational goal. Furthermore, research investigating teacher-student relationships linked teacher emotions to the quality of their relationships with students and their perceptions of students' classroom behavior. Teachers' perceptions of high-quality relationships with students were positively associated with teachers' enjoyment and negatively associated with teachers' anger, anxiety, and emotional exhaustion (Klassen et al., 2012; Taxer et al., 2019). In their model of teacher wellbeing, Spilt and colleagues (2011) suggested that teachers' perceptions of student behavior are partially mediated or moderated by teachers' mental representation of their relationships because their relationship models influence how they perceive and judge student behavior. Testing this hypothetical model, Aldrup and colleagues (2018b) showed that teachers' perceptions of the quality of their relationship with students was significantly associated with student misbehavior and teacher wellbeing and partially mediated the link between student misbehavior and teacher wellbeing. These findings are consistent with the notion that teachers may develop negative habitual evaluations of students that influence how they judge students'

actual behavior in a situation which in turn increase their negative emotions and risk of burnout (Chang, 2009; Chang & Davis, 2009).

Taken together, research on teacher emotions and teacher-student relationships corroborates the findings of this thesis that the quality of the teacher-class relationship is significantly linked to teacher emotions. It is likely that two mechanisms contribute to the link between perceived relationship quality and teacher emotions: On the one hand, the relationship quality itself evokes emotions in teachers (e.g., moving towards or away from the relational goal) and on the other hand, the relationship quality influences how teachers perceive and interpret students' classroom behaviors (e.g., evaluating students' motivation and discipline), that is their appraisals which evoke emotions. Conversely, teachers' perceptions of student behavior might also influence how teachers perceive the quality of the relationship suggesting bidirectional links between both evaluation processes.

Link With Teacher Identity

In both studies, the link between the teacher-class relationship and teacher identity became apparent. In the interviews, teachers stressed that having a good teacher-class relationship was part of their teaching job and reflected their professional competences. In the questionnaire survey, teachers ranked the quality of their teacher-class relationships very high indicating that teachers place great importance on these relationships because they successfully strive to build positive relationships. Relationships with students are important to teachers for personal and professional reasons. Teachers invest themselves personally and professionally in their teaching in that their ways of teaching and interacting with students represent themselves as individual persons and as professionals (Nias, 1996, 1997). Furthermore, their identity as teacher has a personal and professional side because it is formed on the one hand by teachers' personal

beliefs, goals, and values and on the other hand by social expectations, norms, and standards (Beauchamp & Thomas, 2009).

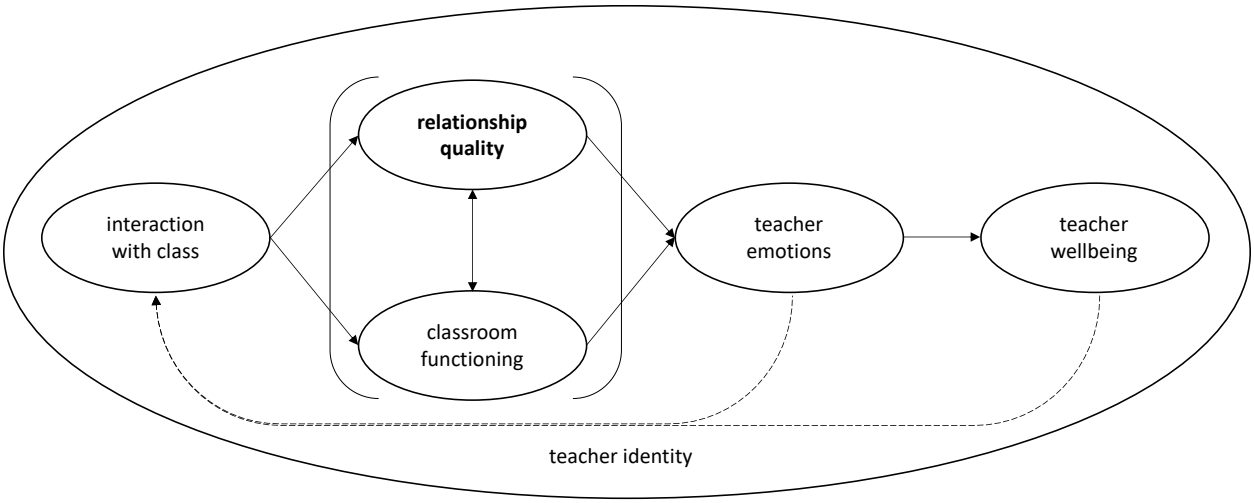
On a personal level, teachers build relationships with their classes because they have the basic human need for relatedness that is satisfied by regular positive interactions with their classes. When teaching their classes, teachers develop interaction patterns with their classes and build mental representations that contain themselves in relation to the class as relationship partner. These mental representations store teachers' personal feelings and thoughts about specific relationships and their personal relationship experiences. On a professional level, teachers strive to create positive teacher-class relationships because it is a main characteristic of their job associated with effective teaching. During their teaching training and throughout their teaching career, teachers learn about the interpersonal aspects of their profession. While becoming a teacher, teachers develop a professional identity that incorporates among others their beliefs, goals, and values with regard to teacher-student relationships (i.e., how they want to interact and connect with students) and their teacher roles (i.e., caregiver, motivator, disciplinarian). The professional identity of teachers influences how teachers evaluate classroom situations in relation to their teaching goals and thus, which emotions teachers will experience in these interpersonal situations (den Brok et al., 2013).

Taken together, the quality of the interaction with students and thereby classes affects how teachers think and feel about their teaching, about themselves as persons, and about their professional roles. Reversely, teacher identity influences how teachers think, feel, and act in the teaching context and how they judge the quality of their teacher-student relationships (Schutz et al., 2007; Zembylas, 2003). Therefore, teacher identity can be understood as background variable

that is reciprocally linked to teachers' evaluation processes of classroom functioning and relationship quality, as well as to their subsequent emotional experiences.

Figure 3.1

Integrative Model of the Quality of the Teacher-Class Relationship and Its Effects on Teachers



Note. The quality of the teacher-class relationship as target construct of this thesis printed in **bold**, teachers' subjective evaluations *between brackets*, bidirectional links as *two-way arrows*, recursive effects as *dotted arrows*, and teacher identity as background variable influencing the overall process as *oval*.

Integrative Model of the Teacher-Class Relationship and Related Constructs

A theoretical model was developed to integrate the links of the teacher-class relationship with teacher-class interactions, classroom functioning, teacher emotions, and teacher identity (see Figure 3.1). The model was inspired by the model of Spilt and colleagues (2011) and differentiates teachers' subjective evaluations of their classroom interactions into their evaluations regarding relationship quality and classroom functioning. Additionally, the model

includes the influence of teacher identity on teachers' thoughts and feelings related to their interaction with the class and places the teacher-class relationship in the broader context of how teachers' interactions with a class influence teachers' wellbeing.

According to the model, teachers' interactions with a class cause teachers' emotions because teachers evaluate these interactions with respect to relationship quality (e.g., students' relational behavior towards them) and classroom functioning (e.g., students' learning behavior in the classroom) and these evaluations in turn trigger emotions in teachers. The evaluations of relationship quality and classroom functioning are closely connected. For example, when teacher and class work together in a lesson, the collaboration can be interpreted in terms of good relationship quality (i.e., students trust the teacher and share their opinions) and in terms of good classroom functioning (i.e., students are motivated, disciplined; teaching can progress). This means that when evaluating teacher-class interactions, teachers make distinct judgements regarding the satisfaction of their relational goal by relationship quality and regarding the satisfaction of their teaching goals by classroom functioning. These different judgments trigger different discrete emotions (e.g., joy, anger, anxiety) and likely interact with respect to the development of emotions. For example, when the interaction with a class obstructs teachers' instructional and management goals, holding the mental representation of generally having a good relationship with this class might weaken the negative effect of students' misbehavior on teachers' emotions (e.g., students' lack of motivation or discipline may be interpreted as an exception or as a result of understandable reasons). Conversely, holding the mental representation of generally having a bad relationship could intensify teachers' perception of disruptive behavior in the classroom and aggravate their negative emotions (e.g., students' lack

of motivation or discipline may be interpreted as typical situation or as deliberate personal attack).

Teacher emotions, which are triggered by the repeated interactions with classes and the related evaluation processes, have long-term consequences for teachers' wellbeing. Persistent negative emotions due to bad relationship qualities and daily hassles with multiple classes likely require teachers to engage in a substantial amount of emotional labor that can cause emotional fatigue and exhaustion. Mainly positive emotions due to good relationships with classes and productive teaching in most classes likely contribute to teachers' wellbeing.

Additionally, teacher emotions and teacher wellbeing likely influence teachers' behaviors in the classroom and consequentially their interaction with the class. When teachers experience negative emotions, they likely act in unfavorable ways towards the class (e.g., imposing disciplinary measures, strict control, or teacher-centered methods). Such unpleasant interactions may in turn increase the likelihood of further unfavorable evaluations and emotions because they elicit negative evaluations regarding relationship quality and classroom functioning. Experiencing positive emotions, teachers likely react with benevolence and goodwill towards the class (e.g., adopting pace and content to the students' needs). Such pleasant interactions give teachers the chance to satisfy their relational and teaching goals, which in turn triggers more positive emotions.

The ways teachers interact with their classes and evaluate these interactions are constantly influenced by the teacher identity as relatively stable teacher characteristic. Among others, teacher identity influences teachers' relational and teaching goals and their definitions of teaching success or failure. If the interaction with a class aligns with their teacher identity (i.e., their personally set relational and teaching goals are met), teachers are more likely to experience

positive emotions. If, however, their identity standards are not met due to bad relationship quality or classroom interruptions, negative emotions are likely to arise. Additionally, repeated experiences that disaccord with teachers' personal and professional ideas about teaching might destabilize their teacher identity and cause uncertainty and stress negatively influencing teacher wellbeing.

The presented model contributes to a more detailed understanding of the links between the teacher-class relationship and related constructs that have been shown to be important correlates of teacher-student relationships and were associated with teacher-class relationships in this thesis. The different paths of this model are drawn based on empirical research on teacher-student relationships and the findings of this thesis. Therefore, this model represents a concise and graphical overview of important teacher variables that should be considered when investigating teacher-class relationships from the teachers' perspective.

Limitations and Future Research

It is important to consider the limitations of the present research because they point at interesting avenues for future research. Even though the limitations of both studies have already been discussed individually, some limitations applying to both studies and the general scope of this research warrant attention.

Being the first studies to investigate the relational phenomenon between teacher and class, the findings of both studies reveal significant links between the teacher-class relationship and teacher wellbeing that should be replicated and investigated in more detail in future research. Given the significant correlations between the quality of the teacher-class relationship, teachers' emotions, and their wellbeing in Study 1, investigating the causality between those links in longitudinal research seems a promising avenue. Additionally, the empirically-derived, step-wise

development of the relationship quality as described in Study 2 underlines the necessity of longitudinal research to investigate changes in relationship quality over time and the likely reciprocal effects between relationship quality and teachers' emotions and wellbeing. Aside from longitudinal research, differences in relationship quality and its differential effects on teacher wellbeing could be studied by exploring intra-individual differences in relationship quality, that is comparing teachers' teacher-class relationships among different classes using a cross-sectional design. It would also be of interest to identify whether teachers typically have similar relationship qualities across all their classes or whether relationship qualities differ strongly between classes, in that teachers typically have good relationships with some classes and rather bad relationships with others. From a longitudinal perspective it would also be interesting to see how specific combinations of relationship qualities in different classes influence teachers' emotions and wellbeing or burnout.

This thesis focused deliberately on the teacher perspective and their relationship experiences to develop an instrument and a framework that operationalizes teacher-class relationships on the teacher-class level. Providing the tools to assess teachers' relationships with their classes, this research opens multiple possibilities for further research to combine different perspectives when exploring relationships between teachers and students. First, future research could explore the associations between the quality of the teacher-class relationship and teachers' individual relationships with the students of one class, that is correlating the TCR score with different measures of teacher-reported dyadic relationships. To average across the individual relationships with students, different approaches can be used: Milatz and colleagues (2015) asked teachers to choose two students of their class they felt the most/least attached to and to rate their relationship closeness with them. Instead of using difference scores (i.e., calculating the

difference between the score of the least and the score of the most attached student), they ran a response surface analysis to predict the effect of both closeness scores as relationship predictors on teacher wellbeing. In contrast, Yoon (2002) asked teachers to categorize the students of their class in different levels of relationship quality (from *very negative relationship* to *very good relationship*) and to report the percentage of students for each category. Then she calculated two variables representing the average number of student with whom teachers had a *good*/*very good* and a *bad*/*very bad* relationship and showed that teachers' stress levels were associated with these two relationship quality variables. Second, future research could explore the associations between the quality of the teacher-class relationship as reported by the teacher (i.e., using the TCR scale) and by the students of the class. To assess the students' perspective on the teacher-class relationship, several possibilities can be considered. As the items of the TCR scale capture teachers' relationship experiences with a class, they can be easily transformed to capture the relationship experience with an individual student (i.e., replacing "class" with "student") or a student's relationship experience with the teacher (i.e., replacing "class" with "teacher"), but they need to be adapted to capture the students' perceptions of the teacher-class relationship. Two different options can be drawn from literature to adapt the TCR items to the students' perspective: Similar to den Brok and colleagues (2006), who assessed the students' perceptions of the teacher's relationship behavior towards the class on an idiosyncratic level ("I find this teacher friendly") and a class level representing the shared view of the students ("This teacher is friendly to the class"), the TCR items could be adapted to the students' perceptions of teacher's relational behavior towards the class ("This teachers trusts my class"). In contrast, similar to Thies (2005), who assessed teacher and student trust by asking them for their trust towards the other ("I trust this teacher/student") and their perception of the other trusting them ("This

teacher/student trusts me"), the TCR items could be adapted to the students' perceptions of the teacher's relationship experience (e.g., "This teacher feels respected by my class"). As both options shift students' perception to either the teacher's relationship experience or the teacher's relationship efforts, a third option could be opted for that tries to capture the students' shared relationship experience with a teacher ("My class feels connected with this teacher"; for an overview see Table 3.1).

Practical Implications

"[When] you don't manage to build this relationship with the students (…) you get the feeling that you are failing or you are looking for reasons within yourself" – Lilly, a secondary school teacher

Table 3.1

Options for Adapting the TCR Items to the Students' Perspective

Teacher's perspective	Students' perspective		
TCR items	Perception of the teacher's relational efforts	Perception of the teacher's relational experience	Shared relationship experience
How is your relationship with this class?	The relationship with this teacher is good.	This teacher feels that he/she has a good relationship with my class.	My class has a good relationship with this teacher.
How is your rapport with this class?	The rapport with this teacher is good.	This teacher feels that he/she has a good rapport with my class.	My class has a good rapport with this teacher.
Do you feel connected with this class?	This teacher connects with my class.	This teacher feels connected with my class.	My class feels connected with this teacher.
Can you trust this class?	This teacher trusts my class.	This teacher feels trusted by my class.	My class can trust this teacher.
Do you feel respected by this class?	This teacher respects my class.	This teacher feels respected by my class.	My class feels respected by this teacher.
Do you feel rejected by this class?	This teacher rejects my class.	This teacher feels rejected by my class.	My class feels rejected by this teacher.
Do you wish you didn't have to teach this class?	This teacher shows that he/she doesn't want to teach my class.	This teacher wishes he/she didn't have to teach my class.	My class wishes this teacher didn't have to teach us.

Given the relevance of the teacher-class relationship as shown by this thesis, several practical implications can be deduced that target the development of positive relationships between teachers and classes and thereby teachers' wellbeing. Even though current research underlines the importance of improving teacher-student relationships, present interventions address teachers' interpersonal behavior in order to enhance students' learning by fostering their

relationships with teachers (Hughes, 2012; Pianta & Allen, 2008; Spilt et al., 2012). Thus, these interventions activate teachers' extrinsic motivation to build positive relationships by underlining the external reward of achieving teaching success. Focusing on the benefits for students, teachers might easily perceive these interventions as adding to the growing burden of dealing with educational matters and students' private matters. In contrast, this study showed the positive effects of good teacher-class relationships for teachers and highlights the fact that teachers themselves can profit from high-quality relationships in terms of their own wellbeing. Interventions focusing on the intrapersonal benefits for teachers offer teachers the opportunity to profit from their own efforts in building positive relationships with their classes and thus, activate their intrinsic motivation. It can be assumed that teachers are more likely to engage in relational interventions that primarily target their own personal and professional needs rather than the positive outcomes for students.

In line with the claims to improve teacher-student relationships, interventions increasing teachers' abilities to create positive teacher-class relationships should be part of the teacher training curriculum as well as part of teachers' professional development throughout their careers (e.g., Sabol & Pianta, 2012). Applying the knowledge that was gained in this thesis about the teacher-class relationship in terms of its meaning and quality will help pre-service and experienced teachers to gain deeper insights into the relational dynamics that unfold between them and their classes. As postulated by Pianta and Allen (2008), providing teachers with knowledge about relationships and encouraging them to reflect their own cognitions and personal tendencies regarding relationships is an important lever in fostering good relationship quality. Furthermore, they argued that effective interventions need to integrate validated instruments assessing teachers' relationship efforts in the classroom to provide teachers with individual

feedback and support (Pianta & Allen, 2008). Thus, the TCR scale and the conceptual framework developed in this thesis constitute promising tools to improve teacher-class relationships in that they assess the relationship quality in different ways and integrate theoretical and empirical knowledge about the teacher-class relationship.

Teaching pre-service teachers about the importance and development of teacher-class relationships can help prepare them for their everyday interpersonal teaching experiences that go well beyond teaching subject matter and grading students' work. Addressing teacher-class relationships as important ingredient of teaching practice can also help to adjust their expectations and ideas about the development of relationships with classes. Furthermore, beginning teachers could apply this knowledge step-by-step in their practical training phases. In addition to being part of the teacher training, teacher-class relationships should stay a topic in teachers' continuing professional development to prevent negative relationship patterns and intervene in cases of decreasing relationship quality. In-service trainings focusing on teachers' relational experiences with classes may increase teachers' awareness of and for ongoing relationship dynamics and the relational influences on their own teaching experience. Increasing in-service teachers' explicit knowledge about the development and quality of teacher-class relationships can also provide them with new ideas and starting points for creating and maintaining positive relationships with their classes. Additionally, through reflecting and discussing differences in relationship quality between different classes, experienced teachers can be discharged of the normative pressure to achieve high-quality relationships with every class on the one hand and be inspired to pursue favorable and satisfying relationship qualities with seemingly difficult classes on the other hand.

In both pre-service and in-service teacher training, the conceptual framework of the teacher-class relationship can be used as promising heuristic to help teachers gain insights into the relational processes with their classes. First, the conceptual framework provides teachers and teacher trainers with a concise and comprehensive model to elaborate and acquire knowledge about teacher-class relationships. Discussing the different elements of the framework, pre-service and in-service teachers can learn about the building blocks of the teacher-class relationships that define its quality and the links between the relationship quality and their teaching experience. Research on teacher-student relationships has already shown that the different relational concepts defined as building blocks in the framework have substantial influence on the quality of teacher-student relationships: trust and respect are part of teachers' caring behavior and fulfill students' need for relatedness (Bieg et al., 2011; Rogers & Webb, 1991), communication in terms of an engaging in an open-ended dialogue is an important ingredient of moral education that fosters caring relationships (Noddings, 2010), and gaining knowledge about similarities fosters the relationship between teachers and students (Gehlbach et al., 2016). Second, the conceptual framework provides teachers and teacher trainers with a structured and clear model that can guide teachers' reflections about teacher-class relationships in a systematic way. Research has already shown that teacher-student relationships can be improved when teachers systematically reflect on their relationship experiences and their mental representations of the relationships (Newberry & Davis, 2008; Spilt et al., 2012). Systematic reflections about relationship topics can by guided by interviews, structured dairy entries, and moderated group discussions (Farrell, 2011; Goldstein & Freedman, 2003; Stuhlman & Pianta, 2002). The conceptual framework offers multiple ways to derive questions about teacher-class relationships that can guide teachers' reflection in different forms of teacher trainings. For example, pre-service teachers could reflect

on their personal and shared ideas about relationships between teacher and class and then compare them with the dialectic nature of teacher-class relationships as proposed by the framework. Additionally, they could reflect and then classify their relationship experiences as former student and becoming teacher. In-service teachers could reflect on their relationship experiences with different classes (e.g., with the "worst" and "best" class) or with one class at different points in time (e.g., at the beginning and halfway through the school year) and then compare these different relationship qualities with the levels of relationship quality as defined by the building blocks. Additionally, they could reflect, discuss, and identify effective strategies to influence relational dynamics in comparison with the conceptually derived mechanisms.

Furthermore, reflection-based interventions for teachers that apply the conceptual framework of the teacher-class relationship could also address habitual judgment processes regarding students' behavior in light of good and bad relationship quality and help teachers identify unfavorable evaluation processes that could potentially decrease their emotional wellbeing (Chang, 2009). In addition, teachers' implicit theory of teacher-class relationship quality as either malleable or fixed could be a topic of reflection (Chang & Davis, 2009). To foster teachers' beliefs that they can influence the quality of their relationships with classes (Yoon, 2002), the theoretical concept of complementarity in the interaction could be discussed, because it underlines the interdependence of interpersonal behavior between the relationship partners (e.g., Pennings et al., 2018; Pennings et al., 2014). Given the link between the teacher-class relationship and teachers' professional identity, another topic of reflection could be teachers' mostly implicit ideas about their teaching roles as elicited by metaphors such as "A teacher is like…" (e.g., Löfström et al., 2010).

In addition to integrating knowledge and reflection about teacher-class relationships in pre-service and in-service teacher trainings, teachers should be supported on an institutional level to be able to establish good teacher-class relationships. Institutional considerations should include the possibilities for regular non-academic activities and projects, special lessons that are dedicated to relationship building (e.g., using team building strategies or adventure-based educational actions for group building), and continuity in teaching the same class for several years. Additionally, an innovative approach to grading could incorporate the accomplishment of class-specific, commonly agreed on tasks and goals in the grading system to support relationship building mechanisms. Finally, teacher educators, school leaders, and policy makers should be made aware of the fact that the quality of teacher-class relationships matters if they want to keep teachers healthy and engaged in teaching.

Conclusion

Teachers build relationships with the classes they teach and these relationships impact their wellbeing. The aim of the present thesis was to shed light on the nature and quality of teacher-class relationships as relational phenomenon between teacher and class. By defining and investigating teacher-class relationships, this thesis fills a striking research gap and helps propel research on the effects that teacher-class relationships have on teachers and students. It is worth noting that this research is the first step in disentangling the relational dynamics between teachers and classes. Therefore, future research could use the developed tools to assess teacher-class relationships empirically and conceptually to pursue the promising avenue of investigating teacher-class relationships.

Moreover, the findings of this thesis encompassing two studies and analyzing qualitative and quantitative data have shown that teacher-class relationships are an important factor in

teachers' everyday lives. Underpinning the importance of high-quality relationships between teachers and classes, this thesis points to the importance of pre-and in-service teacher education that includes trainings to support teachers in developing good teacher-class relationships. Based on the voices of teachers, enhancing positive teacher-class relationships means to achieve that "[students are] not working against you, but [that] they also want [to work with you], and that we can work together"[6] and eventually teacher-class relationships in which "we're pulling together"[7] that will help sustain teachers' wellbeing.

[6] Matthew, 2
[7] Lilly, 11

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Appendix A

The Building Blocks of the Teacher-Class Relationship

Academic respect	Personal respect
“dass die Klasse mich in meiner Rolle anerkennt, erstens. Muss gar nicht als Mensch sein, wobei ich glaube, dass das ganz oft dazukommt“ Hannah, 12 “dass die Klasse auf mich hört, also wenn ich Ansagen mache oder vorschreibe, was sie zu tun haben, dass sie die auch machen” Markus, 1 „ich weiß gerade, dass die eine Häufung von Klausuren haben, und dann versuche ich halt da weniger Leistungsabnahmen zu machen“ Holger, 3 „aber vom fachlichen her denke ich, wenn man da sozusagen gut versucht das zu machen, dann kriegt man sicher auch den Respekt“ Matthew, 12 „wenn sie dann merken, da gibt es Spielregeln und wenn man sich an die Spielregeln hält, dann flutscht es, und dann flutscht es auch ohne dass man schimpfen muss“ Lena, 12	„dass wenn ich zum Beispiel nicht laut reden kann, sind 12 Leute total leise, […] letztlich gibt es so eine Art von Mögen oder Respekt oder Anerkennung.“ Hannah, 1 „weil die Schwierigkeiten, die familiären Schwierigkeiten, wirtschaftlichen Schwierigkeiten vielleicht noch intensiver erlebt werden – das hat auch was mit Respekt zu tun, dass ich das auch respektieren muss und mich nicht … nicht so arrogant erhebe“ Larry, 12 „die Leistung, die man bringt als Lehrer, dass die anerkannt wird“ Matthew, 12; „Ja, dass sie respektvoll mit mir umgehen, dass sie meinen Einsatz, meine Leistung für die Klasse anerkennen.“ Marcus, 12
Academic trust	**Personal trust**
„wenn ich merke, dass ich … dass nicht mit offenen Karten gespielt wird, dass ich hintergangen werde oder dass ich angelogen werde in der gröberen Form. Das würde eine Beziehung doch sehr trüben denke ich.“ Lena, 1 „wenn die denen [den Lehrkräften] dann auch nichts mitteilen und auch kein Vertrauen haben und sich dann irgendwie auch gegenüber verschließen ... ja. Und dementsprechend es dann auch zu Unterrichtsstörungen kommt, weil sie eben den Lehrern dann natürlich auch nicht wohlgesonnen sind“ Lilly, 1 „wenn ich mich zur Tafel umdrehe und schreibe vertraue ich, dass mir da keiner einen	“also wie vertraut man sich, trauen die Schüler sich auch bei Problemen zu dem Lehrer zu kommen“ Martha, 3 „Ich habe zum Beispiel tatsächlich das Gefühl, dass mir Leute da auch erzählen, wie es ihnen gerade geht in gewissen Momenten“ Holger, 3 „wenn man tatsächlich mal irgendwas äußert oder was Privates erzählt, dass sie das nicht sofort in der ganzen Schule weitererzählen.“ Heidi, 6 „mich zu Rate ziehen oder mich fragen oder mir irgendetwas erzählen möchten,

Stinkefinger zeigt […] Oder wenn ich eine Gruppenarbeit mache, dann vertraue ich darauf, plus minus einer Streuung, dass die alle die Gruppenarbeit mitmachen“ Larry, 6; „wir kommen voran im Unterricht, weil sie mir vertrauen, weil sie da denken, was ich sage, das funktioniert oder >das glaube ich<“ Markus, 1	was sie eben anderen nicht erzählen würden“ Lena, 4 „wenn wir was ausmachen, kann ich mich drauf verlassen das es unter uns bleibt“ Lena, 10
Academic communication	**Personal communication**
„dass man auf einer menschlichen Ebene gut miteinander auskommt, also nicht nur dass man ein Fach vermittelt, sondern, dass man auch mit denen so irgendwie normal reden kann mit einzelnen Schülern oder auch mit der ganzen Gruppe“ Heidi, 1 „Das bedeutet, dass ich mich erstmal aufrege und dass ja Zeit, sehr viel Zeit dafür verwende um sozusagen irgendwelche Dinge, die mich stören, erstmal klarzustellen“ Matthew, 7 „Dann bedeutet es für mich eine ständige Unsicherheit, ob ich jetzt klar kommuniziert habe, was ich will und wie ich es will […] dann würden wir wahrscheinlich auch nicht zu einem Konsens kommen.“ Hannah, 10 „dass ich sie erreiche, mit dem was ich vorhabe, das ist für mich eigentlich …dass ich den Weg gefunden habe, um mit dieser Klasse … wie ich diese Klasse erreiche“ Markus, 3 „Also sie wollen mich nicht herausfordern, um mit mir zu diskutieren über was Sinnvolles sage ich jetzt mal, über das Thema an sich, sondern um der Diskussion willen Zeit totschlagen und solche Dinge.“ Holger, 13	„Also die wollen dann auch mit mir in Meinungsaustausch treten, es ist nicht nur so, dass sie mich nach dem Wissen fragen, sondern es geht auch so in andere Richtungen.“ Holger, 9 “dass man auch mal so zwischen Tür und Angel was bespricht oder halt nicht nur stur den Unterricht, sondern dass halt die Schüler einem auch ein Feedback geben, so nach dem Motto >Ja, das ist in Ordnung was man macht<.“ Matthew, 3 „dass sie sich [nicht] über einen beschweren und man ahnt gar nichts davon, dass die irgendwas gegen einen haben könnten“ Heidi, 10 „Also die Gespräche, ich unterhalte mich auch gern. Wir sitzen auch oft in der Pause, noch fünf bis zehn Minuten, sitzen wir halt da und dann redet man halt über grad Bayern oder sonst irgendwelche Themen, was gerade aktuell ist.“ Marcus, 8 „dann frage ich erstmal nach und dann ist verrückterweise oft so, dass ich dann auch verstehen kann, warum da gerade [jemand Quatsch macht] dann kann ich immer ganz anders drauf reagieren“ Hannah, 6

Academic knowledge	Personal knowledge
„Ich bin da Klassenleiterin und ich hatte die Klasse schon letztes Jahr, kenne die von daher einigermaßen und auch deren Probleme“ Heidi, 1	“ich weiß, dass manche privat mit ganz anderen Dingen kämpfen […] man hat es so im Hinterkopf“ Hannah, 4
„Und dann wissen die, wie ich funktioniere oder wie es hier funktioniert und andersrum auch.“ Hannah, 13	„eben wenn man erfährt, dass … dass bei einem Kinder der Vater einen schweren Autounfall hatte und dann kommt die Mutter und erzählt mir […]“ Lena, 4
„lehrerzentrierter Unterricht anhand von Beispielen, das mit denen durchgeht, dann sie üben lässt - das funktioniert momentan mit der Klasse super. Und da musste ich auch ein bisschen ausprobieren.“ Markus, 3	„und sie können auch, wenn ich dann grantig werde, weil sie so lebhaft sind, können auch damit besser umgehen und sie wissen, dass das gerechtfertigt ist“ Martha, 1
„ich wiederum weiß aber auch irgendwann, was sie zu leisten fähig sind und schätze das auch richtig ein und kann das Einordnen und dann meinen Unterricht drauf abstimmen“ Holger, 2	„dass man die Schüler vielleicht auch überhaupt nicht privat kennt […], sondern vielleicht einfach nur die Schüler auf ihre Noten reduziert oder auf ihre Leistungen in der Schule “ Lilly, 1

Note. Interview quotations are cited as ‘teacher name, item number’.

Appendix B

The Levels of Relationship Quality of the Teacher-Class Relationship

Level -2
„ich hatte es hier, wo ich hier angefangen habe im ersten Jahr“ Larry,11; „also den Fall hatte ich auf jeden Fall schon“ Lilly, 11; „hatte ich natürlich auch schon Klassen“ Matthew, 5 „dass das eben alles vielleicht zusammenkommt und dann muss man da trotzdem rein und dann ist das eine Menge, was nicht stimmt. Und dann gibt es eben da keine gemeinsame Grundlage.“ Hannah, 11 „da müsste man jetzt wirklich aufpassen, was man sagt in der Klasse,“ Matthew,6 „Wie bringt man die Stunde um die Ecke, ohne zu viel Angriffsfläche zu bieten, möglichst ohne Konflikte?“ Heidi, 13 „Wenn ich einfach nicht mit den Aufgaben die ich als Lehrer habe, richtig wahrgenommen werde, also wenn das, was ich versuche Ihnen beizubringen- wenn das so abgetan wird, oder wenn es dann heißt >Was betrifft das mich?<“ Lena, 12
Level -1
„das ist eine ganz schwierige Klasse“ Markus,5; „es gibt manchmal so [schwierige] Klassengemeinschaften“ Holger,4; „hatte ich ja auch schon ein paar Mal“ Hannah, 5 „nur ... organisatorische Probleme, ich muss immer schauen, dass die Klasse ruhig ist, dass sie ihr Zeug machen, dass sie alles dabeihaben“ Markus, 11; „dass ich halt ständig irgendwelche Zusatzarbeit leisten muss, die nichts mit Unterricht in dem Sinne zu tun hat, sondern einfach mit verwaltungstechnischen Sachen und einfach erzieherische Maßnahmen ständig anstehen.“ Matthew, 13 „dass ich auf einen störungsfreien Unterricht dringe und das auch durchsetze. Wenn halt da auch mal geschrieben wird. Wenn ich den einen Schüler auch mal zum Rektor geben muss.“ Larry, 5 „dass es auch ein Miteinander auf dieser Ebene, ich bring euch was bei oder wir müssen jetzt dieses und jenes machen, nicht mehr funktionieren würde“ Lena, 11
Level 0
„dass beiderseits gar kein Bedürfnis ist, irgendwie persönliche Worte zu wechseln oder so. Und die akzeptieren einen zwar als Lehrer, aber weiter ist da vielleicht nichts.“ Heidi, 1 „dass man auch nicht gern über Dinge, die man außerhalb vom Unterricht oder auch im Unterricht, die nicht mit dem Fachwissen oder mit dem Fach zu tun haben, nicht gern drüber redet.“ Martha, 4 „man macht seine Arbeit und interessiert sich jetzt nicht dafür, was die Klasse macht“ Matthew, 4

„Da würde ich gucken, dass der Unterricht, dass ich einen Unterricht mache, der korrekt ist. Dass ich kein schlechtes Gewissen haben muss, wo ich weiß, sie haben das bekommen, ich habe ihnen das gegeben, was ich ihnen in meiner Rolle geben muss als Lehrer/in“ Hannah, 3
„dass man eine Klasse hat, zu der man wirklich keinen Zugang findet, […] mit der man auch so nichts unternimmt über den Schulalltag hinaus. Wo man auch gar nicht die Lust hat, was zu unternehmen“ Holger, 4
„dass die halt nur dasitzen und die Zeit absitzen. Wenn sie vielleicht höchstens einmal lernen um jetzt einmal für eine Ex mal vorbereitet zu sein oder so“ Matthew, 2
Level 1
„dass man auf einer menschlichen Ebene gut miteinander auskommt, also nicht nur dass man ein Fach vermittelt“ Heidi, 1
„also ich hab‘ wirklich das Gefühl, sie merken das, das es jetzt kein Kampf ist, dass wir das versuchen und dadurch gibt es ein gutes Feedback.“ Matthew, 8
„durch irgendeinen Blödsinn kommt man auf ein anderes Thema. Und dann bleibe ich kurz mal fünf Minuten dabei und habe trotzdem nicht das Gefühl, dass mir da jetzt irgendwie die Stunde entgleitet“ Holger, 3
„weil sie sich an die Regeln hält und weil man deswegen auch eine gute Beziehung hat und man nicht ständig zu irgendwelchen Ordnungsmaßnahmen greifen muss und so weiter“ Lilly, 11
Level 2
„[weil] ich selber für mich den Anspruch habe und der ist bei der 9 x für mich höher als bei einer anderen Klasse.“ Markus, 5
„wie gesagt, es ist Respekt im gegenseitigen Umgang vorhanden und Vertrauen ... und mehr wünsch ich mir eigentlich, also ich kann mir nicht mehr wünschen“ Lilly, 5
„dass man mal lockerer mit denen umgehen kann oder mal einen lockeren Spruch lassen kann“ Matthew,6; „Wenn ich ab und zu mal eben auch einen Schwank aus meinem Leben erzähle […] das macht mich als Mensch für sie greifbarer.“ Holger, 12
„irgendwie zu wittern, wie die Stimmung so ist oder ob man auf irgendein spezielles Thema gerade eingehen sollte“ Heidi, 3
„Wir haben schon ein paar Erlebnisse zusammen gehabt über die wir jetzt auch noch sprechen oder manche Dinge über die wir lachen“ Martha, 10
„mich zu Rate ziehen oder mich fragen oder mir irgendetwas erzählen möchten, was sie eben anderen nicht erzählen würden“ Lena, 4
Level 3
„das würde ich wahrscheinlich nie erreichen. Also und das ... Ist vielleicht auch dann wieder zu distanzlos. Ich finde so eine gute Distanz ist schon mal wichtig.“ Larry, 4

„Bestimmt auch wenn da Persönliches auch mal auftreten kann und auch wieder von beiden Seiten. Also es gibt Tage, wenn irgendwas passiert, dass man dann sagen kann: „heute läuft es bei mir [=schlecht], ihr müsst mir heute helfen.“ Hannah, 3
„wenn einem deren Schicksal irgendwie nahegeht.“ Heidi, 4
„dass sich ein Schüler für einen Lehrer interessiert, ist ... in den seltensten Fällen […] kommt natürlich auch deswegen nicht so oft vor, weil ich ja schon 40 oder 50 Jahre älter bin und das ist ganz logisch, dass man sich nicht für eine Person interessiert, die im Augen von denen alt ist.“ Larry, 4

Note. Interview quotations are cited as ‘teacher name, item number’.

Appendix C

The Mechanisms Influencing the Relationship Quality of the Teacher-Class Relationship

Rules
„wir haben da so eine Art von gemeinsamem Verständnis, die wissen meine Rolle, ich weiß auch deren Rolle, ich weiß auch, dass die kurz mal Quatsch machen“ Hannah, 1 “dass diese, die Mindeststandards eingehalten werden: dass sie mich begrüßen, [...] der respektvolle Umgang, Höflichkeit, was ich ja versuche vorzuleben“ Larry,12; „[dass] sie alle pünktlich kommen in der Früh; die ... begrüßen, die sind einfach nett.“ Markus, 8 „die […] machen irgendjemandem was kaputt und sagen dann sie haben es nicht gemacht, oder verstecken was“ Lena, 10 „wenn es um das Thema Hausaufgaben geht, dann muss ich nicht immer alles durchkontrollieren, sondern wir haben auch das System, dass die Schüler mir sagen und freiwillig zugeben“ Lilly, 1 „wenn jemand was tut und bewusst tut oder unterlässt, dann hat das Konsequenzen […] >das ist dein Handeln und wenn du dafür die Konsequenz nimmst ist es völlig okay, aber akzeptiere die Konsequenz.<“ Hannah,6; „Also so dieses Bedürfnis und Bewusstsein, dass man da jetzt irgendwelche Konsequenzen für sich davonträgt, wenn man die Hausaufgaben nicht macht“ Holger, 5
Tasks
„dass beide Partner sage ich jetzt mal, also ich und die Klasse, dass beide voneinander wissen, was verlangt wird.” Holger, 7 „das ist so etwas wie, dass irgendwelche Pflichten, die im Zusammenhang mit der Schule einfach erfüllt werden. Das ist, wie [z.B.] Hausaufgabenerfüllung, dass die organisatorischen Dinge erfüllt werden“ Lilly, 10; „[dann] sehen sie, dass hin und wieder durch das gemeinsame Arbeiten, dass da bisschen was hängen bleibt und dann merken sie aber auch, dass es daher kommt, dass ich eben versuche es ihnen auf allen möglichen Wegen beizubringen“ Matthew, 12 „wenn vielleicht die Vorstellungen, die man vom Leistungsstand hat, wenn eine Klasse nicht so mit dem übereinstimmen […] oder dass man ihnen zu viel Hausaufgaben gibt“ Heidi,5; „wir haben keinen Konsens darin was ich will, was die Schüler wollen, was ich anbiete […] da gibt es Erwartungen von den Schülern, die sich nicht mit dem treffen, was ich will, da treffen wir uns nicht wirklich.“ Hannah, 1
Goals
„wenn ich sage, wir machen das jetzt, dann macht das die Klasse, also dieses Ziel was wir zusammen formuliert haben und ... angehen möchten“ Markus, 9; „Das bedeutet, dass man zum Beispiel gemeinsame Ziele hat, also das Ziel, das wir haben, ist die Abschlussprüfung zu schaffen“ Matthew, 4

„Man hat ja einen gemeinsamen Weg eigentlich, den man dann da in diesem Schuljahr miteinander begeht“ Lilly, 4; „Dass das Erfolg zeigt, die Arbeit, die wir dort investieren. Und die investiere ich ja nicht alleine, sondern ich muss die Schüler auch dazu motivieren diesen Weg mitzugehen.“ Larry, 2
Bond
„dass man sie irgendwie als Menschen schätzen lernt mit ihren Eigenarten“ Holger, 8; „jeden Einzelnen so nehmen wie er ist.“ Lena, 8
„dass ich mich interessiere dafür, was mit den Leuten, wie sie sich entwickeln […] also für mich persönlich ist es vor allem so was wie so ein mitzugucken mitzuhören, also immer ein offenes Ohr zu haben“ Hannah,4; „ich ... nehme Anteil – soweit es mir möglich ist mit 2 Stunden in der Woche – an den Entwicklungen der Schüler“ Larry, 4
„[wenn] man den Schüler halt nicht so als Ganzes sieht ... und sowohl und dementsprechend dann halt auch, ja irgendwelche Stärken die Schüler jetzt zum Beispiel haben nicht in der Schule mit ... eingebracht werden, nicht?“ Lilly, 3

Note. Interview quotations are cited as ‘teacher name, item number’.

Appendix D

The Quality of the Teacher-Class Relationship, Teacher Emotions, and Classroom Functioning

Level -2
„da wo ich gemeint habe bis zum Schluss war das ein Gekämpfe und musste ich wirklich, also die haben sich dann, die haben auch einen sauschlechten Quali gemacht in Religion und da war das Geschrei groß.“ Larry, 11; „wenn ich merke, dass ich immer kämpfen muss da in dieser Klasse.“ Holger, 13
„Beziehungsweise wenn einfach irgendwelche Aufträge, Anweisungen, Wünsche von Schülern einfach auch ignoriert werden und man dann ohnmächtig dasteht und nicht mehr weiterweiß.“ Lilly, 12
„bei denen ist es so, da schwimme ich, wenn ich reinkomme. Ich habe das Gefühl, als würde ich auf Treibsand gehen manchmal. […] Die sind für mich nicht greifbar. Das ist so als würde ich irgendwie durch Nebel durchschauen, wenn die dasitzen.“ Holger, 3
„Das ist schon eine Haltung, wenn man reinkommt und die Leute, das ist so wie so die kalte Schulter zeigen, so leicht wegdrehen […] wenn da so gar keine Emotion oder vielleicht sogar – wie es dann auf mich wirkt – ein geringschätziger Blick, dann Kommentare“ Hannah, 9
Level -1
“die sind sehr anstrengend, die kosten mich sehr viel Zeit als Lehrer, dass ich da ständig Verweise schreiben muss und solche Sachen“ Matthew, 11
„Und ich habe irgendwie so das Gefühl gehabt, die wollen das auch gar nicht ändern, also man hat irgendwie das Gefühl gehabt, jede Initiative, die man ergreift verläuft wieder im Sande und da hatte ich dann irgendwann auch keine Lust mehr“ Holger, 8
„Ich würde immer jemanden nach vorne holen, dass der die Aufgabe mit den Schülern bespricht, während ich dann durchgehen kann und Polizei spielen kann.“ Hannah, 6
„würden nicht … auf mich hören, würden Anordnungen verweigern und die Unterrichtsqualität würde deutlich darunter leiden.“ Markus, 1
Level 0
„in der Klasse ist es halt recht unruhig geworden in der Zeit, also die brauchen immer Präsenz vom Lehrer und wenn der Lehrer weg ist, dann funktioniert das nicht so gut.“ Martha, 6
„Also das einfach wenig funktioniert, ohne ständige Kontrolle. Wirklich mit … ständige Heftkorrektur und Hefteinsammeln und … sehen, ob Einträge vollständig sind“ Lilly, 6
„Da hätte ich das Gefühl, dass wenig Interesse und wenig Motivation für das besteht, was ich da mache, was ich mit ihnen durchnehmen muss.“ Holger, 3

„Die haben da keinen blassen Schimmer um was es da geht, […] wo dann auch noch Mathematik dazu kommt und dann Zweifel halt sich kombinieren und dann habe ich einfach … Schwierigkeiten“ Markus, 5
Level 1
„dass ich dort einen Unterricht halten kann, wo ich bestimmte Inhalte, wo ich bestimmte Methoden, Arbeitsformen mit der Klasse […] ausprobieren oder machen kann“ Larry, 2 „Ich habe das Gefühl, dass sie es annehmen zum Großteil, wie ich das mache, wie ich meine Fragen stelle.“ Holger, 2 „Und das bedeutet ich kann reingehen und dann gucke ich, wie ist die Stimmung gerade. Und dann habe ich natürlich meinen Plan, aber es ist nicht so eng geführt wie ich gedacht habe mit 12, dass es sein müsste.“ Hannah, 3 „wenn man sieht, das bringt was, der Einsatz.“ Markus, 11
Level 2
„weil inzwischen können wir mehr miteinander lachen und ich glaube wir, also sowohl die Klasse, als auch ich, wie soll ich sagen, wir genießen die Stunden mehr, also natürlich arbeitet man auch intensiver, seitdem es besser läuft, aber man hat auch inzwischen drin Freude, sag ich mal.“ Martha, 1 „Ich kann Freude, Interesse wecken in der Klasse und das ist ein Austausch an Gedanken, an Ideen, die die Schüler dann auch entwickeln und somit ein Ganzes entsteht.“ Larry, 2 „und ich habe das Gefühl, wenn ich da was investiere, dann fällt es auf fruchtbaren Boden, so könnte man es vielleicht umreißen“ Holger, 11; „wenn man gerne reingeht in die Klasse und nicht mit Widerwillen, sondern eher mit Neugier und Interesse, wie werden sie denn heute drauf sein oder so“ Heidi, 8 „dass ich mir denke, ja, oder wenn ich irgendwelche Bedenken habe bei irgendwas, dass ich mir denke >Ach nein, mit der Klasse krieg ich das schon hin<“ Martha, 10
Level 3
„wenn mal was schieflaufen kann und unsere Beziehung aber schon so gesettled ist […] dass plötzlich der Unterricht viel interessanter wird, weil die Leute viel mehr preisgeben und ich auch. Das kann aber auch sein, dass man plötzlich über andere Dinge, die aktuell gerade passiert sind, sprechen kann.“ Hannah, 3 „also das würde wirklich bedeuten, dass man die Integrität von Schülern zu schätzen [weiß] … also man muss die schon sehr gut dann kennen auch, also die muss man wirklich schon mehrere Schuljahre gehabt haben und wahrscheinlich in anderen Kontexten als nur im normalen Unterricht kennengelernt haben“ Holger, 6 „dass ich ein Teil der Klasse bin und nicht, nicht immer nur außerhalb stehe, sondern in der Klassengemeinschaft eben auch ein Teil von dieser Klasse bin.“ Lena, 4

Note. Interview quotations are cited as ‘teacher name, item number’.

Appendix E

Latent Correlations of TCR Scale with Class-Level Constructs

Variables	1	2	3	4	5	6	7
1. Teacher-class relationship	–	.80	−.67	.68	.45	−.44	.69
2. Teaching Enjoyment		–	−.74	−.69	.54	−.46	.71
3. Teaching Anger			–	.68	−.48	.68	−.60
4. Teaching Anxiety				–	−.42	.43	−.58
5. Class Achievement [a]					–	−.44	.70
6. Class Discipline [a]						–	−.45
7. Class Motivation [a]							–
Cronbach's Alpha α	.89	.93	.87	.81	.88	.87	.90
Mean	6.05	4.02	2.13	1.53	3.27	2.49	3.49
SD	.85	.87	.92	.69	.86	.92	.74

Note. [a] As perceived by the teacher. All reported correlations are significant at the $p < .01$ level.

Teachers' class perception was assessed by three short scales measuring teacher-perceived *class achievement*, *class discipline* and *class motivation* as used in a study by Taxer and Frenzel (2018). Each short scales comprises four items which are rated on a 5-point Likert Scale (from "strongly disagree" to "strongly agree"). Sample items are "In this class, there are many high performing students" for *class achievement* (α = .88) "In this class, lessons are often very disrupted" for *class discipline* (α = .87), "In this class, the students are motivated" for *class motivation* (α = .90).