Together we are even stronger! The longitudinal interplay of cohesion, global school motivation, and achievement of primary school students.

Inhalt/Content

Qualifikation	Masterarbeit/Master Thesis
Zusammenfassung des Forschungsanliegens/ Research Proposal	Classroom as micro-context The ecological model of child development presumes that the quality of interactions between the child and elements in its proximal environments influence developmental outcomes (Bronfenbrenner, 1977; Bronfenbrenner & Morris, 1998) .In 2011 primary school children living in OECD countries spent yearly on average 791 hours in school (OECD, 2013) hence the classroom and its climate depict a very important micro-context. Various definitions of classroom climate can be found in the literature. Helmke and Weinert, 1997 define classroom climate as the collective or individual perception of the quality of a class as a social system. The atmosphere among students and between students and teachers are influential to this perception. Classroom climate and motivation Research by Ryan, Deci, and Connell et al. (Connell & Wellborn, 1991; Deci, Vallerand, Pelletier, & Ryan, 1991; Ryan & Powelson, 1991; Ryan, Stiller, & Lynch, 1994) stresses the importance of what they call 'relatedness' as a foundation for motivation. They describe relatedness as having "secure and satisfying connections with others in one's social milieu" (Deci et al., 1991). Applied to school one could assume that a classroom providing children with a climate of warmth and security through cohesion among students and warm supportive student-teacher interactions might increase motivation and provide an atmosphere that facilitates achievement. Teacher-student interactions as individual characteristic Research investigating correlates of perceived positive student-teacher interactions documented correlations with school satisfaction (Woolley, Kol, & Bowen, 2009), positive school-related affect (Roeser, Midgley, & Urdan, 1996) higher school related self-efficacy (Skinner & Belmont, 1993) interest, motivation (Wentzel, 1998), choice of more complex cognitive activities (Howes & Smith, 1995) and better academic performance (O'Connor & McCartney, 2007; Rimm'Kaufman & Chiu, 2007; Wentzel, 1998). Teacher-student interactions as classroom climate characteristic Whereas the above-cited studies investigated positive student-teacher interactions as an independent variable that is rated

individually by every student, some studies also looked at it as a classroom climate characteristic.

Classrooms marked by a positive climate between students and teachers, teacher sensitivity and warmth were more likely to have students who thrive (La Paro, Pianta, & Stuhlman, 2004) and perform better academically (Hamre & Pianta, 2005). A study by Hindmann, Skibbe, Miller and Zimmermann, 2010, however, failed to replicate these findings.

Reyes et al. (2012) investigated classroom emotional climate characterized as degree of warmth, connection and negativity as well as teacher sensitivity and teacher´s regard for student perspectives using multilevel mediation. They report a positive relationship between their measure of classroom emotional climate and grades that was mediated by student engagement. They suppose that a positive classroom emotional climate facilitates academic success, because students are more engaged and enthusiastic about learning and perhaps school itself.

Social integration as individual characteristic

Whereas students are taught by different teachers throughout the course of a day, in primary school they mostly remain in the same class group. Hence to meet students` need of relatedness, to feel comfortable at and motivated for school the climate among the students of a class could play an important role.

Studies investigating social integration of individual students reported correlations with achievement, pro-social goal pursuit, interest in school (Wentzel, 1998), engagement (Patrick, Ryan, & Kaplan, 2007), school satisfaction (Samdal, Nutbeam, Wold, & Kannas, 1998) and achievement (Véronneau, Vitaro, Brendgen, Dishion, & Tremblay, 2010) as well as negative correlations with emotional distress (Wentzel, 1998).

Cohesion as a classroom climate characteristic

Other but fewer studies looked at the class as one system and investigate cohesion to capture student-student interactions as a classroom climate characteristic. Haertel (1981) reports a positive correlation between achievement and cohesion. Appling a multilevel model, König (2009) investigated the correlation of cohesion and learned helplessness in school and detects correlations on the individual student as well as on the classroom level.

These findings point out that cohesion might be an influential classroom climate component. Just like the climate transmitted by teacher-student interactions has effects on school outcomes such as motivation and achievement, this could also be the case for cohesion. Being in a class low in cohesion might decrease students' motivation to go to school, because they might perceive being in their classroom as a permanent stressor. This might bind mental capacity that in turn is not available to focus on content (Wentzel, 1998) . Attending a classroom with a warm, friendly atmosphere among students might increase global school motivation because

the classroom and thus the school are connected with positive emotions. Students might also participate more because they are less afraid of being laughed at for wrong answers. Such classes might also provide students with more emotional and instrumental support. Moreover, teachers might be able to teach more effectively because they need to spend less time on conflict solving and as a consequence have more time for content. Other processes could work smoother as well: Partner work might not be delayed due to discussions about who would work with whom. If a student forgets his materials it might not involve the teacher to organize a student that lets him look into his book because students are used to support each other.

Since the class group remains the same between different subjects I would not expect subject specific relationships but effects on global variables such as global school motivation and average achievement.

Whereas empirical research exploring the effects of cohesion as a classroom characteristic is somewhat scarce, a vast body of practitioners' handbooks provides methods to teachers and pedagogics on how to improve cohesion (e.g.: Dyksrta, 1996; Hatto et al., 2003; Zerbe, 2012). Additionally, there are numerous offers of theater-, outdoor-, and circus-pedagogics aiming at improvement of social competencies, cohesion and student-student relationships. These outcomes are seen as a value in itself but also assumed to be associated with healthy psychological development, students' school satisfaction, motivation and an atmosphere that facilitates successful learning.

Aim of this study

As illustrated above, the literature provides evidence that a positive classroom climate matters for students' motivation and achievement. On the level of the individual student there is evidence that positive student-student and student-teacher relations enhance motivation and achievement.

Looking at these variables as a classroom climate characteristic emphasis has been placed on teacher behavior, indicating that a warm, supportive climate has positive effects on students` developments. Empirical research investigating climate resulting from cohesion is scarcer. This contrasts to the large amount of pedagogical handbooks and practices aiming at improving cohesion in classes. Hence there is the need to investigate if there is empirical evidence supporting the assumption that cohesion among students is a fruitful basis for their emotional and cognitive development.

The transactional model of development (Cicchetti & Lynch, 1993; A. Sameroff, 1975; A. E. Sameroff, 2009) posits that a child and its environment mutually influence each other over time. For the context of school this would mean that students in a classroom with strong cohesion might develop a higher global school motivation because they like being in their class, in turn the higher school motivation might lead to more cohesion because they are usually

	good tempered, which leads to more positive student interactions. In order to be able to disentangle the underlying mechanisms/ processes longitudinal data is needed. To date, there is no study looking at the interplay of cohesion and motivation and achievement longitudinally. Furthermore, except Reyes (2012) and König (2009), past studies failed to take into account the multilevel structure of the data. Summing up this research aims at closing the empirical gap between pedagogic advices and empirical evidence by looking at cohesion, global school motivation and achievement in one study to investigate their dynamic relations using longitudinal data, while taking into account the multi-level structure of the data.
Herleitung der Fragestellung/ Deduction of research question	s.o.
Daten/Variablen Data/variables	Lehrerfragebogen Klassenklima Welle 1 Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse arbeiten die Kinder gut zusammen. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse verstehen sich die meisten Kinder gut miteinander. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse werden Konflikte rasch gelöst. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse ist es selbstverständlich, dass die besseren Kinder den schlechteren helfen. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse ist jeder nur auf seinen eigenen Vorteil bedacht. Welle 2 Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse arbeiten die Kinder gut zusammen. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse verstehen sich die meisten Kinder gut miteinander. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse werden Konflikte rasch gelöst. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit diese auf Ihre Klasse zutrifft. In dieser Klasse ist es selbstverständlich, dass die besseren Kinder den schlechteren helfen. Bitte sagen Sie mir zu jeder der folgenden Aussagen, in wie weit

diese auf Ihre Klasse zutrifft. In dieser Klasse ist jeder nur auf seinen eigenen Vorteil bedacht.

Welle 3
Klassenklima nicht erfasst.

Schülerfragbogen
Klassenklima
Welle 1
Klassenklima: In der Klasse halten wir alle zusammen.
Klassenklima: Manche Schüler machen sich lustig über Klassenkameraden.
Klassenklima: Wir helfen uns gegenseitig.

Welle 2
Klassenklima: In der Klasse halten wir alle zusammen.
Klassenklima: Manche Schüler machen sich lustig über Klassenkameraden.
Klassenklima: Wir helfen uns gegenseitig.

Welle 3
Nicht erhoben
Schülerfragebogen
Social Integration
Welle 1
Wie viele Freunde und Freundinnen hast du in deiner Klasse?
Meine Mitschüler sind nett zu mir.
Ich komme mit den anderen Kindern in der Klasse gut aus.

Welle 2
Ich komme mit den anderen Kindern in der Klasse gut aus.
Wie viele Freunde und Freundinnen hast du in deiner Klasse?
Meine Mitschüler sind nett zu mir.

Welle 3
Ich komme mit den anderen Kindern in der Klasse gut aus.
Meine Mitschüler sind nett zu mir.
Schülerfragbogen
Globale Motivation
Welle 1
Schule ist ganz schön nervig.
Ich gehe gerne in die Schule.
Ich arbeite im Unterricht gerne mit.
Ohne Schule wäre alles viel schöner.

Welle 2
Schule ist ganz schön nervig.
Ich gehe gerne in die Schule.
Ich arbeite im Unterricht gerne mit.
Ohne Schule wäre alles viel schöner.

Welle 3

	Schule ist ganz schön nervig.
	Ich gehe gerne in die Schule.
	Ich arbeite im Unterricht gerne mit.
	Ohne Schule wäre alles viel schöner.
	Kompetenztests
	Welle 1
	- Logisch-Abstraktes Denken (CFT 20-R) - Summenwert : CFT 20-R, Subtest Matrizen (Weiß, 2006)
	- Lesekompetenz (ELFE 1-6) - Summenwert : ELFE 1-6, Subtest Textverständnis (Lenhard & Schneider, 2006)
	- Mathematische Kompetenz (DEMAT 3+) - Summenwert : DEMAT 3+, Subtest Arithmetik (Roick, Gölitz & Hasselhorn, 2004)
	- Rechtschreiben (DRT 3) - Summenwert : DRT 3 (Müller, 2003)
	- Wortschatz (CFT 20, WS) - Summenwert : CFT 20, Ergänzungstest Wortschatz (Weiß, 1998)
	Welle 2
	- Lesekompetenz (ELFE 1-6) - Summenwert : ELFE 1-6, Subtest Textverständnis (Lenhard & Schneider, 2006)
	- Mathematische Kompetenz (DEMAT 4) - Summenwert : DEMAT 4, Subtest Arithmetik (Gölitz, Roick & Hasselhorn, 2006)
	- Wortschatz (CFT 20, WS) - Summenwert : CFT 20, Ergänzungstest Wortschatz (Weiß, 1998)
	Welle 3
	- Logisch-Abstraktes Denken (CFT 20-R) - Summenwert : CFT 20-R, Subtest Matrizen (Weiß, 2006)
	- Lesekompetenz (ELFE 1-6 E) - Summenwert : ELFE 1-6, Subtest Textverständnis (Lenhard & Schneider, 2006), zuzüglich eigenentwickelter Ergänzungsitems
	- Mathematische Kompetenz (DEMAT 4) - Summenwert : DEMAT 4, Subtest Arithmetik (Gölitz, Roick & Hasselhorn, 2006)
	- Rechtschreiben (DRT 4) - Summenwert : DRT 4 (Grund, Haug & Naumann, 2003)
	- Wortschatz (CFT 20, WS) - Summenwert : CFT 20, Ergänzungstest Wortschatz (Weiß, 1998)
Hypothesen/ Hypotheses	a) Cohesion and global school motivation mutually influence each other positively over time.
	b) Global school motivation and achievement mutually influence each other positively over time.
	c) Cohesion and achievement mutually influence each other positively over time.
Geplante Analysen/Proposed data analyses	Multivariate latent growth modeling
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