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Support of students in primary schools: a comparative case study in a selective education system

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ABSTRACT

Previous research has demonstrated that school processes can be significantly associated with (in)equality in schools. However, it is unclear what these practices in schools look like. This study aims to understand support practices for students in primary schools in a highly selective education system. The findings are based on a contrastive case comparison of five primary schools in Switzerland with a large percentage of children with a migration background. Quantitative surveys with students in Grades 4, 5, and 6 ($n = 372$) and qualitative analyses of group discussions with teachers were conducted. The results of the qualitative study, and in part also of the quantitative study, show that schools differ systematically in providing support for students. None of the schools was found to have a support milieu that could be described as non-discriminatory. In the majority of the schools, the support milieu is oriented towards high performing students with a higher socio-cultural family background or high educational aspirations; this may lead to the reproduction of inequalities. Only two schools seem to have implemented compensatory support strategies, at least partially. Further, the schools can be differentiated regarding the teachers' perceived degree of their active participation in supporting students.

KEYWORDS


Inequality; support milieu; primary schools; case study

1. Introduction

Many research studies point to unequal opportunities in education systems. However, there are substantial differences between countries (OECD, 2016a), since the degree of inequality is significantly related to specific characteristics of the education systems. One of these characteristics is the mode of tracking at the lower secondary school level. Regarding the degree of equality, comprehensive education systems seem to outperform those with a strong tracking system (OECD, 2016a, p. 225). Additionally, the earlier that students have to be allocated to different tracks, the more that segregation effects on students with low or high socio-cultural family backgrounds can be identified (OECD, 2016b, p. 177 f).

How can these effects be explained? Previous research has identified several influencing factors. For one, individual or family attributes, e.g. individual aspiration level for academic success and school choice (Boudon, 1974) or habitus and family capital (Bourdieu & Passeron, 1977), strengthen segregation effects (e.g. Baumert, Nagy, & Lehmann, 2012; Blossfeld, Blossfeld, & Blossfeld, 2019;

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Castro et al., 2015). For another, school and teaching processes seem to be related to (in-)equality in education systems as well. Several studies show that schools provide different learning opportunities and set different required levels of performance in dependency on the composition of their student body (Baumert, Stanat, & Watermann, 2006; Belfi, Haelermans, & De Fraine, 2016; Palardy, 2008; Peetsma, Van der Veen, Koopman, & Van Schooten, 2006).

In addition, studies have also found that specific compositions of the student body do not have the same effects for all groups of students. It is assumed that these effects arise through transmission processes within a school, which in turn are shaped by values and norms, ethos, or teachers' different performance expectations for students with low or high socio-cultural family background (Belfi et al., 2016; Rubie-Davis, Flint, & McDonald, 2012; Timmermans, Kuyper, & Van der Werf, 2015).

Studies on schools that are successful contrary to expectations (Muijs, Harris, Chapman, Stoll, & Russ, 2004; Sammons, 2007, p. 20ff) confirm that factors within a school, in dependency on specific context factors, have an effect on the quality of the learning opportunities. They show that these schools differ from less successful schools in specific internal school factors, such as a specific focus on teaching and learning, a positive school culture, or continuous professional learning strategies (Muijs et al., 2004). Furthermore, studies have found that 'the combination of strategies selected' (Harris, Chapman, Muijs, Russ, & Stoll, 2006, p. 419) in the schools is important for students' positive learning development, whereby the selection and combination of these strategies is shaped situation- and context-specifically, in dependency on the perceived requirements and needs of the students on-site and on the context.

Accordingly, it can be assumed that educational inequality is also generated by and within the single school, particularly in education systems that have highly selective structures, such as in Switzerland's education system. Here, schools and teachers are required to support their students according to their individual needs and abilities (qualification function of schools), while they are at the same time required to allocate students after 6 years of primary school to different educational paths (selection function of schools).

However, since there is a lack of empirical studies that focus directly on the supporting of students within schools, it is far from clear: (1) if and to what extent there are differential support milieus in schools that are dependent on individual student characteristics such as achievement, socio-cultural family background, or migration; and (2) whether or not schools differ in this respect. Examples of support measures are, for instance, developing additional learning material for specific groups of students, providing extra classes to help students with their homework, or allocating additional teachers to provide individual support to single students. Analysing how the support milieus differs within and between schools means focusing on the core of what schools have to do and on what has the potential to help students achieve the learning goals. Accordingly, it remains unclear why some schools, despite similar contexts, implement different support milieus that in the end tend to reinforce segregation rather than reduce it.

Addressing some of these research gaps, this study aims to better understand the provision of support in primary schools by analysing how students perceive the support provided by their teachers, what teachers' orientation towards the support of students looks like, and whether there are differences between schools.

This study was conducted in Zurich, Switzerland. In contrast to many other countries, Switzerland is one of the countries with a high level of differentiation (tracking) on the lower secondary level (European Commission/EACEA/Eurydice, 2016). Also, PISA results showed that the level of inequality—in terms of the relationship between students' socio-economic and socio-cultural status and achievement—is particularly high in the Canton of Zurich (Felouzis & Charmillot, 2013). And since Switzerland has implemented new regulations aimed at integrating students with special education needs into regular schools and thus at preventing them from

being assigned to separate schools and classes, the dilemma between support and selection in Zurich mentioned above is even more pronounced.

2. Research on differential support of students

Previous research provides various indications concerning mechanisms that go beyond the individual practices and beliefs of individual teachers and point to a collective perspective or orientation regarding differential support of students and assessment of student performance.

An approach that has been discussed for a long time is 'institutional discrimination' (Gomolla & Radtke, 2009). According to this approach, inequality in educational participation, or unequal distribution of educational opportunities, which Gomolla and Radtke (2009, p. 21) examined regarding ethnic differences between students, is to a significant extent not due to children's attributes and their initial disadvantages due to migration but is instead produced within the organizational contexts of the local school system. Institutional discrimination results from legal provisions but also from everyday actions, argumentation, and decisions made on the basis of institutionalized and shared knowledge, norms, routine practices, and patterns of perception on the part of actors in the school. Gomolla and Radtke's study identified mechanisms of direct and indirect discrimination in schools. One relevant mechanism is that when students show similar performance, teachers utilize domestic and family learning conditions and support possibilities as 'negative prognostic criteria' (p. 283, freely translated here) when they make recommendations for the students' lower secondary level track (p. 265ff.). Other studies confirmed these results and found that attributes not related to student achievement, such as socio-cultural family background or migration, have an effect on teachers' evaluations of students' performance at the transition from primary school to lower secondary school (Ditton & Krüsken, 2006; Timmermans et al., 2015), from lower secondary education to upper secondary education (Scharenberg, Wohlgemuth, & Hupka-Brunner, 2017), or from upper secondary education to university (Jerrim, Chmielewski, & Parker, 2015).

The degree of the cultural fit between the school and students and their families has been discussed for some time as a possible school norm that has a significant effect on processes and structures within schools that intensify unequal opportunity. An insufficient degree of fit, evident in differential use of work tools and cultural tools, proves to be an obstacle to educational success, especially for students with a migration background or low socio-cultural family background (Kramer & Helsper, 2010). In the schools, the degree of cultural fit is utilized as a line of reasoning for differentiation, supporting, or sanctioning processes. The resulting decisions, for example regarding certain support strategies to prepare students for the transition to lower secondary school, subsequently open or close the students' access to higher tracks.

Also regarding the selection and use of support strategies for students, studies show that schools and teachers do not support all students equally but instead differentially, based on (subjective) estimations of students' cognitive, motivational, family, or social potential to meet specific learning requirements. Students whose potential for learning development is deemed negative by the schools and/or teachers thus differ from other students who are deemed to be on the threshold of development potential ('bubble kids'): The difference is not primarily in their lower performance but in their socio-cultural background (Booher-Jennings, 2005; Brown & Clift, 2010; Krieg, 2008). Students with a socio-cultural family background that is not evaluated as boosting their potential to succeed are subsequently assigned to less demanding programmes, or their access to education generally or to higher education specifically is restricted. Similar school mechanisms become visible when schools make decisions on support for students with special needs (Kronig, 2007). As a result, students with a migration background or low socio-cultural family background are found disproportionately often in schools or classes for students with special needs.

All in all, previous research shows that school decision processes and actions within a school can be significantly associated with intensification of segregation effects. These are not isolated processes; instead, it can be assumed that there is a complex intertwining of selective system

structures and decision-making by school actors. In addition, previous research points to interdependency between actions by the school and actions by individual actors, especially teachers within the school. Supporting and selection processes are thus not solely individualized based on teachers' individual attitudes, values, or competencies but are instead institutionalized and a part of the school organization. The literature thus points to the practice of selective support of students at the school level. However, it remains largely unclear to what extent the schools differ in their support practices and how differential school support milieus form. In particular, there is a lack of empirical studies that focus directly on the supporting of students in schools, analyse if and to what extent schools have differential support milieus that are dependent on individual student characteristics such as achievement, socio-cultural family background, or migration, and analyse whether or not schools differ in this respect.

3. Research questions and theoretical framework

This case study aimed to understand the provision of support to students within schools and to discover whether it differs between schools. We addressed the following research questions (RQ):

- RQ 1: How do students perceive the support provided by their teachers? Are these perceptions influenced by students' individual characteristics such as socio-cultural family background, students' educational aspirations for secondary school, language use at home, migration background, and performance level? To what extent do these perceptions differ between schools?
- RQ 2: What teachers' orientations can be reconstructed in the school-specific practice of assigning students to receive additional support? What orientations do the schools have in common, and what orientations differ across schools?

The analyses followed the theoretical frameworks of Fend (2008) and Weick (1976, 1995). Starting from an opportunities/utilization model of school quality (Fend, 2008), we assume that the learning opportunities provided by the school (the school's support strategies) depend not only on the objective composition of the student body but also on the *perceived use* of the opportunities by the students. Accordingly, although schools do not differ in terms of objective socio-economic contexts and student body composition, they may differ in terms of support strategies, since the within-school actors *perceive* the school's context differentially.

According to Fend (2008), the individual and collective transformation of regulatory provisions into school practice, which Fend calls recontextualization, can be understood as one of the main factors influencing differential support strategies in schools. Also, following Weick's (1995) sense-making approach, we assume that collective sensemaking in organizations not only rationalizes organizational decision-making *ex post* but also produces the orientation for any social practice (including decision-making) *ex ante*.

In accordance with this theoretical argumentation, we expect that schools with similar socio-economic conditions have school-specific patterns of providing differential support that vary in dependence on students' achievement level, socio-cultural family background, or migration background. School-specific patterns that have the potential to strengthen equality in school could be seen in compensatory strategies such as supporting particularly low achieving students and students with a low socio-cultural family background or with a migration background (Kyriakides et al., 2019). In contrast, school-specific patterns that might reproduce inequality in school could be seen in strategies that are particularly focused on students with high performance, students with a high socio-cultural family background, and students who are Swiss (Gomolla & Radtke, 2009).

4. Research design

The research design is based on a contrastive case comparison (Creswell, 2014) of five primary schools with divergent support strategies in Zurich, the largest city in Switzerland. With each primary school we used both not standardized and standardized methods of collecting and evaluating the data: (a) one group discussion with teachers per school, and (b) standardized questionnaires with students in Grades 4 to 6. Accordingly, the research design was also contrastive in comparing teachers' and students' perspectives on support strategies within the same school.

4.1. School sample

The research questions can be validly examined only if the schools under comparison have comparable socio-structural and organizational context conditions (see Ditton, 2013). Two criteria for the selection of the schools were important: (a) type of schools (Level 1 in the ISCED 2011 classification) in the city of Zurich: our focus was on *primary schools* (total 97 schools); and (b) the *mixed index* that corresponds to the percentage of non-German speaking children and children with a migration background in a school had to be particularly *high* (> 50%). Based on these two criteria, our study population included 21 schools. The reasons for these criteria were related to the highly selective transition system from primary school to lower secondary school: In Zurich, after 2 years of kindergarten and 6 years of primary school, students have to be allocated to three different tracks in lower secondary education: *Gymnasium* (most advanced level) and secondary school streams A (challenging) and B (lowest requirements, basic level). Only students who pass later the final exam in *Gymnasium* earn the university entrance qualification. Furthermore, the *Gymnasium* quota after primary education is particularly low, at 20%. Therefore, in primary schools with a high proportion of non-German speaking children and children with a migration background, the dilemma between support and selection of the children might be even more pronounced than in schools with a lower mixed index. It is therefore the best school level to analyse the research questions.

In this study, the primary schools were recruited following a *theoretical sampling strategy*. The basis for selection was an analysis of existing documents, such as evaluation reports and school websites on promotion strategies, from all identified 21 primary schools. The analysis of these documents revealed a high diversity of supporting strategies in the schools, ranging from school-internal strategies like providing additional lessons for homework or test preparation, language courses for foreign students, or music courses to strategies that included cooperation with school-external institutions in order to provide students more learning opportunities (e.g. kids' university, extra help, or mentoring programmes for students with a low socio-cultural family background, courses at the local theatre and music school). To validate the identified strategies, we conducted interviews with the school principals. Based on the confirmation of the identified strategies, five primary schools with a large percentage of non-German speaking children with a migration background (mixed index from 50% to 63%) were selected (see Table 1). It was decisive that the variance between the primary schools regarding the support strategies be particularly large. Participation in the study was voluntary. It is important to know that for the whole study, two additional schools (schools 1 and 6) were selected due to the fact that their mixed index decreased over recent years substantially. However, for the current analyses, they were excluded, as they had a much lower mixed index.

Table 1. Sample description.

	School 2	School 3	School 4	School 5	School 7	Total
<i>Population</i>						
Students/teachers ^a	360/46	310/67	414/86	211/41	365/49	1660/289
Mixed index ^b	55%	61.1%	58%	49.5%	50.1%	
Low status ^c	25-30%	>35%	>35%	30-35%	>35%	
<i>Student questionnaire</i> (4., 5., 6. Classes), (schools' response rates)	49 (38%)	74 (67%)	107 (77%)	58 (73%)	84 (63%)	372 (66.4%)
<i>Group discussions:</i>						
Participants (sex (f/m), teacher (t), special education (se), care (c))	7 (f: 7; t: 4, se: 2, c: 1)	5 (f: 2, m: 3, t: 1, se: 4)	5 (f: 4, m: 1, t: 3, se: 2)	4 (f: 3, m: 1, t: 1, se: 3)	4 (f: 2, m: 2, t: 4)	25

^aBased on a school's self-report.

^bMixed-index: proportion of pupils with foreign language and foreign nationality (without Germany, Austria and Liechtenstein) per school.

^cIndex for the neighbourhood of annual income and educational status, percentage of persons with low SES (official data from the Canton of Zurich).

4.2. Method

4.2.1. Quantitative student survey

To analyse the first research question on the perceived support, we collected data from all students in Grades 4, 5, and 6 using paper-and-pencil questionnaires ($N = 372$, response rate 66.4%) in spring 2015. The questionnaire contained items on demographic characteristics, perception of the school environment, support from teachers, educational aspirations, and motivational dimensions. [Table 1](#) shows the sample and the response rate of the individual schools. The response rates for students ranged from acceptable to good.

4.2.1.1. Indicators. For the current analyses, one scale from the student questionnaire was analysed. Perceived individual support from teachers (ISFT) was developed following Buff et al. (2007, p. 21), and was assessed by six items (Cronbach's alpha: .80):

- My teachers listen to me when I tell them something.
- My teachers have time for me.
- My teachers take care of me.
- My teachers help me when I need help.
- I get along well with my teachers.
- I like being with my teachers.

The response scale was a 4-point Likert scale from 1 = strongly disagree to 4 = strongly agree.

In contrast to the scale used by Buff et al. (2007, p. 21), the students had to rate all their teachers, not only one teacher. In the schools analysed in our study, the students have not only one teacher but several. Furthermore, due to the integrative school system in the analysed schools, not all of the students within one class have the same teachers. Importantly, not only do the students have several teachers but also the teachers teach several different classes within the same school. Therefore, when answering the items with the introduction 'my teachers', the students must have a perspective that goes beyond the class where they are sitting. In other words: They have to take a school-wide perspective. This is also supported by a longitudinal study that investigated the relationship between individual perceptions of experienced support from teachers and school variables: Nakamura (2008) showed that the students' perception of individual support from teachers was closely correlated with the students' perception of the school climate.

To analyse the reliability of this indicator on school level, we computed the intraclass-correlation ICC 2 (Lüdtke, Trautwein, Kunter, & Baumert, 2006, p. 87). According to Lüdtke et al. (2006), for

analysis of relationships between groups, a necessary condition is acceptable reliability of the aggregated indicator on the higher level. The intraclass-correlation ICC 2 of ISFT revealed a good value of .796. Therefore, by aggregating the individual perceptions of experienced support from teachers of all students within a school, this indicator is a reliable measure for analysis of the perceived support on a school level.

To examine whether students differ in their perceptions of receiving support from their teachers we looked at the following student characteristics, which have been found to be correlated with unequal educational opportunities:

- *German language use at home* (LANG) was assessed by a single item: How often do you speak German/Swiss German at home? (4-point scale from 1 = never to 4 = always). The language spoken at home has a significant effect on competencies (OECD, 2016a) and school success (Ditton, 2016).
- *Socio-cultural family background* (SCFB) was assessed by a single item: About how many books are there at home? (6-point scale from 1 [0–10 books at home] to 6 [> 500 books at home]). A number of studies have shown that the number of books at home can be used as a good indicator for analysing the objectified cultural capital of families (Paulus, 2009, p. 3). Socio-cultural family background has strong effects on the school success of students. This is also the case on a school level (Ditton, 2016; Mullis, Martin, Foy, & Hooper, 2017; OECD, 2016a).
- *Educational aspirations for secondary school* (ASP) was assessed by a single item: Which of the three levels of lower secondary school would you like to enter after primary school? (1 = basic level, 2 = intermediate level, 3 = advanced level). Studies have found that students' aspirations have a strong effect on transition decisions (Wohlkinger & Ditton, 2012).
- *Migration background* (MIGR) was assessed by three single items: Were you born in Switzerland? Was your mother born in Switzerland? Was your father born in Switzerland? An integral item was computed: 1 = Swiss (both the students and their parents were born in Switzerland), 2 = Second-generation immigrants (students were born in Switzerland, while at least one parent was born abroad), 3 = First-generation immigrants (both the students and their parents were not born in Switzerland). Migration-related disparities in achievement (e.g. OECD, 2016a) can be identified when controlling for socio-cultural family background. Migrants are basically disadvantaged when it comes to educational opportunities, which cannot be fully explained by the socio-economic situation (Becker & Schubert, 2011).
- *Grades in mathematics* (MATHS) and *German* (GERM) were assessed by two single items, identifying the grades on the last school report (1 = very low to 6 = very high). In the Swiss education system, the schools are mandated to promote both stronger and weaker students. However, due to new regulations, low-performing students are particularly in the support focus. An increase or a reduction in educational inequalities is thus also connected with how well this mandate is realized.

4.2.1.2. Analysis strategies. To analyse the association between several student characteristics and the support that students perceive, for the correlation between the support scale (ISFT) and continuous scales (MATH; GERM; SCFB) we calculated a Pearson's correlation for every school, and for the categorical variables (ASP; LANG; MIGR) we computed a Spearman's rank-order correlation (ρ). P-values depend on sample size. In small samples, as is the case in primary schools in Zurich, the risk of a Type II error is higher than in large samples, and medium or large effects might be not detected (Cohen, 1988; Field, 2018). We therefore report not only the significance levels but also the effect sizes ≥ 0.20 . According to Cohen (1988), $r = 0.10$ corresponds to a weak, $r = 0.30$ to a medium, and $r = 0.50$ to a strong effect. To compare whether the correlation coefficients between the schools differed significantly, they were transformed into Fisher's z-values. This method can be used for both Pearson's r and Spearman's ρ (Myers & Sirois, 2006). As multiple pair comparisons were made, the accumulation of the alpha error was corrected using Holm-Bonferroni correction. Both p-values are

reported. Since there were almost no missing data in the student data set (0.4% ISFT), we used pairwise deletion in the analyses of the data (Lüdtke, Robitzsch, Trautwein, & Köller, 2007).

4.2.2. Qualitative study

4.2.2.1. Sampling strategy. The aim of the qualitative analyses was to uncover divergent school-specific practices of assigning students to receive additional support. To this end, after administering the standardized questionnaires, we conducted two group discussions with 4–7 persons at each sampled school in the spring of 2015. Following the standards of qualitative research and in particular the standards of the applied documentary method (Bohnsack, 2010), we chose the following theoretical sampling strategy (Patton, 2002): First, we conducted exploratory problem-centred interviews with the school principals, uncovering among other things internal school differentiations at the level of organizational responsibilities. We then had the school principals create two groups of teachers having different roles in the organization: one group with special responsibilities in school development (e.g. members of a steering committee) and one group without. To answer our research question, we were particularly interested in the latter group.

4.2.2.2. Data collection and analysis. The group discussions served to uncover conjunctive, tacit areas of experience. In discourse, collectively shared patterns of meaning are articulated in the mutual discursive referencing and become visible (Bohnsack, 2010). To achieve this, the discourse should be independently developed by the group, with the condition that the researcher takes a position of strong restraint and methodologically reflected foreignness. The analysis was done following Bohnsack's (2014) documentary method, which is a reconstructive, sequential interpretation procedure based on Mannheim and Wolff (1964) phenomenological sociology of knowledge in a further praxeological development. The central feature is a distinction between two different levels of knowledge: reflective/theoretical knowledge and pre-reflexive/tacit knowledge. The method is particularly suitable for eliciting pre-reflexive knowledge embedded in practical experience. First, the content of the group discussions was summarized to reveal the theoretical knowledge of the group. In a second step, the interpretation process focused on how participants handled topics. In this way, tacit knowledge is reconstructed through 'positive and negative (counter) horizons' (Bohnsack, 2014). The sequential interpretation process was based on a consequent contrastive procedure, looking for minimal and maximum contrasts within and between group discussions.

4.2.3. Triangulation

To obtain school-specific constructions and perceptions regarding support for students, the data was triangulated on the level of results. The triangulation followed the logic of a convergent parallel mixed method design for comprehensive analysis on the research question (Creswell, 2014).

5. Results

5.1. RQ 1: perceived support from the teachers from the perspective of students

Generally, students stated that they received sufficient individual support from teachers (ISFT) ($M = 3.41$, $SD = 0.51$, $N = 370$). In the level of perceived ISFT, no significant differences could be identified between the schools ($F_{(2,268)}$, $df = 4$, $p = .06$).

Analysing the relationships between individual students' characteristics and perceived ISFT, we found significant correlations at four schools but not at *school 3* (see [Table 2](#)). In almost all of the analysed student' characteristics, effects on the perceived ISFT could be detected. At all of the schools, only migration background seems to be not related to the perceived ISFT.

At *school 2* there were significant, positive correlations between ISFT and grade in German (GERM) ($r = .31$, $p = .033$), educational aspirations ($r_s = .40$, $p = .008$), and socio-cultural family background (SCFB) ($r = .33$, $p = .024$). Between ISFT and grade in mathematics (MATH) ($r = .24$, $p = .098$),

Table 2. Correlations between ‘Individual support from teachers’ (ISFT) and student characteristics.

Schools	2	3	4	5	7
MATH ¹	.24	-.19	.23*	.15	.02
GERM ¹	.31*	-.16	.21*	.24	-.12
ASP ²	.40**	.00	.13	.27	.17
LANG ²	.07	.11	-.05	-.20	.22*
SCFB ¹	.33*	-.13	-.08	.21	.08
MIGR ²	.06	-.04	-.05	.06	.01

Note. n: school 2 (43 ≤ n ≤ 47), school 3 (65 ≤ n ≤ 74), school 4 (98 ≤ n ≤ 107), school 5 (52 ≤ n ≤ 58), school 7 (70 < n < 84); * p <.05.; **p <.01; ¹Pearsons r; ²Spearman's Rho r_s; MATH = grade in mathematics (1 = very low to 6 = very high); GERM = grade in German (1 = very low to 6 = very high); ASP = educational aspirations for secondary school (1 = basic level, 2 = intermediate level, 3 = advanced level); LANG = German language use at home (4-point scale from 1 = never to 4 = always); SCFB = socio-cultural family background (6-point scale from 1 (0–10 books at home) to 6 (> 500 books at home)), MIGR = migration background (1 = Swiss, 2 = second-generation migrants, 3 =first-generation migrants), effect sizes ≥.20 are highlighted in grey.

the correlation is not significant but still relevant, with an effect size ≥.20. Students with better grades, higher educational aspirations, or a higher socio-cultural family background tended to perceive or perceived stronger support from their teachers than students with lower scores on these indicators.

At school 4 we found significant positive correlations between ISFT and grade in German (GERM) (r =.21, p =.034), and grade in mathematics (MATH) (r =.23, p =.020). Students with better grades perceived stronger support from their teachers than students with lower grades.

At school 5 there were no significant correlations but positive correlations with an effect size ≥.20 between ISFT and educational aspirations (ASP) (r =.27, p =.052), grade in German (GERM) (r =.24, p =.077), and socio-cultural family background (r =.21, p =.116). This was also the case for the negative correlation with the language spoken at home (r = -.20, p =.134).

At school 7 we found a significant positive correlation between ISFT and language spoken at home (r =.22, p =.049). Students who spoke German more often at home felt better supported by the teacher than those who spoke German less often at home.

To see whether the schools differed, the correlation coefficients were compared (see Table 3). As seen in Table 3, schools differed in several dimensions, particularly school 2 from school 3 and school 3 from school 5. Further, school differences were mostly found in terms of grade in German, socio-cultural family background, and language spoken at home. However, after Holm-Bonferroni correction, there was a significant difference in the correlation coefficient MATHS/ISFT only between school 3 and school 4.

Table 3. Comparison of correlation coefficients between schools, significance level (p).

Scale	Individual support from teachers (ISFT)										
	School comparison	2–3	2–4	2–5	2–7	3–4	3–5	3–7	4–5	4–7	5–7
MATH ¹		.01	.47	.32	.11	<.01*	.03	.10	.31	.08	.23
GERM ¹		.01	.27	.35	.01	.01	.01	.41	.43	.01	.02
ASP ²		.02	.06	.24	.10	.20	.07	.16	.21	.41	.29
LANG ²		.42	.25	.09	.21	.15	.04	.25	.19	.03	.01
SCFB ¹		.01	.01	.26	.08	.39	.03	.11	.04	.14	.22
MIGR ²		.31	.28	.49	.41	.47	.30	.39	.26	.41	.34

Note. ¹Pearsons r; ²Spearman's Rho r_s; MATH = grade in mathematics; GERM = grade in German; ASP = educational aspirations for secondary school; LANG = German language use at home; SCFB = socio-cultural family background, MIGR = migration background; p = significance level before Holm-Bonferroni correction (highlighted in grey); * p <.05 after Holm-Bonferroni correction (highlighted in grey).

5.2. RQ 2: school-specific practice of assigning students to receive support

To illustrate the reconstruction of collective structure of orientations underlying practical action, the interpretation process will be made clearer by taking the example of a focus passage from the group discussion at *school 2* (see 4.2.1). In a second step, we present the orientations for all schools, which are based on case comparisons (see 4.2.2).

5.2.1. School 2: insufficient support in the present-day system

In the following excerpt¹ taken from a longer passage, teachers were talking about requirements and demands having increased but scarce resources having remained the same. The chosen excerpt followed a question by the interviewer about changes in the available support measures.

Focus passage: Lack of support in the integrative system #00:15:18-9# -#00:17:46-6#

Teacher E: I know the situation only as it takes place under the integrative system, so I cannot contrast the two. But it is really my experience that support is there, but it is very often not available right when and where you need it.

Teacher B: Yes, for me it is the same, actually. I often hear about it, and I can imagine that it could have been better if we had retained the earlier concept. That is, that you do not integrate but instead form separate classes, simply because for the pupils who have a good performance level it is maybe a disadvantage, and I think that is too bad. And I have the feeling that that would not be such a disadvantage, in my opinion, for the pupils who would be separately supported based on their performance level [...]

Teacher A: It is mainly my experience also that, well, specifically, I have a girl who has been released from learning goals in mathematics. However, she wants to learn, and she does not give up. She receives special needs support but outside the classroom because she works on a third-grade level, I have Grade 6 now. And there it is good. But I have other students in the class who would not have been in regular classes some years ago, in fact a few, and they have actually no support, namely, because they have not been released from learning goals. [...] And there I notice that I am a bit up a creek without a paddle. I reach the limit of what I can do, because the children are in classroom but cannot really follow, and so it often occurs that they need to get attention by creating a disturbance, just to show 'I'm here, too'. And then I feel, for example, that I have too little support, yeah, far too little support.

This passage starts with teacher E's statement that the present-day integrative system is a burden and not a relief for teachers. Teacher B then compared the current situation to the separative system of the past, which he had not known personally but which he rated positively. The pedagogical focus of the special educational needs system in the past had been on separate classes and on good performers within regular classes, whereas special needs were perceived as a burden. The comparison made by teacher B revealed a view of students that is oriented towards a performance norm. Teacher A contrasted this with students who are released from learning goals² and for whose performance development the teachers did not feel responsible. Regarding the students released from official learning goals, special educational needs support outside the regular classroom was preferred by the teachers, but even problematic students who were not labelled as having 'special education needs' appeared to remain a burden for the teacher in the classroom. This gave rise to the teachers' feeling that they had to support the wrong students: Supporting low achieving students with a special needs indication in an integrative system did not make sense to these teachers; the top-down implemented support system did not seem to provide a practice-guiding orientation.

5.3. Comparison and triangulation

Taking the example of a passage from school 2, we now present the results of the comparative analyses of all schools examined. The passages from the other schools are published as supplemental material in a separate paper. To answer research question RQ2, we followed the interpretation process of the documentary method and looked for minimal and maximum contrasts to reconstruct the following two dimensions: teachers' 'view of students' and 'support orientation'. These results were triangulated with the data from the quantitative analyses, so as to obtain a differentiated picture of the individual schools (see Table 4).

5.3.1. School 2

As discussed above, students' educational needs became the focus when students were perceived as a resource or as a burden for the teachers' work. According to data from the qualitative analysis, the support focus was on students having the potential to improve their performance while students with special educational needs appeared as a burden in classroom. This is in line with the quantitative findings that students with higher performance, higher socio-cultural family background, and higher educational aspirations perceived receiving more support.

5.3.2. School 3

Similar to the findings for *school 2*, teachers in the group discussion at *school 3* described themselves as restricted by external conditions in their ability to provide pedagogical support. The teachers saw no room for action. Instead, the majority of the special education teachers in the group discussion reported a feeling of deprofessionalization, a loss of responsibility for students for whom they had carried responsibility in the special education classes of the past. Students with special needs were mentioned, but in contrast to *school 4*, these needs instead served as justification of the teachers' own professional status within the school; the single students with special needs, however, were not the particular focus.

This is quite in line with the quantitative results, where no systematic associations between students' characteristics and perceived support were identified. But as was the case at *school 2*, also at *school 3* no compensatory support profile could be identified. In contrast to *school 2*, however, the support profile was not oriented towards reinforcement of inequality by supporting particularly those students that due to their socio-cultural family background were already advantaged in reaching the learning goals.

5.3.3. School 4

In contrast to *schools 2 and 3*, at *school 4* the teachers saw themselves as having some range of action, but there was also controversial debate over this. On the one side, teachers criticized the present-day support system and the way that it limited their range of action. On the other side, the teachers spoke of the school-internal development of the integrative model as a naturally established collective process.

Further, in contrast to the orientation found at *school 3*, the teachers at *school 4* articulated the individual needs of students. This orientation towards the students' individuality was shown also in their criticism of the integrative support system (as at *schools 2 and 3*), whereby the teachers criticized in particular that the individual needs of different groups of students from challenging circumstances were not given sufficient attention. In line with this feeling of the teachers, quantitative data showed that students with a lower socio-cultural family or migration background did not perceive stronger support from the teachers. Instead, students with higher performance in German and mathematics felt better supported than students with lower performance.



Table 4. Summary of the results.

	School 2	School 3	School 4	School 5	School 7
Group discussions with teachers					
Teachers' view of students	Focus on students with potential to improve their performance	Focus on students with special needs to justify professional status	Individual-centred and focus on students from challenging circumstances	Temporal support for low performers who do not fit the norm	Focus on students with potential to improve their performance and on those coming from families that share values and norms of the educated class
Teacher's support orientation	Limited range of action; Students as relief or burden for class and teacher	Limited range of action, Deprofessionalization as a loss of responsibility	Contrast between school-intern established integrative system and limited range of action	Active in arrangements for support measures; Orientation to norm and collectivity within school	Pragmatically assigning students to existing support measures
Student questionnaire					
Individual support from teachers (SPT) as perceived by students	Students with higher socio-cultural family background, higher educational aspirations, and higher grades perceived a higher level of support	No relationship between the students' characteristics and the perceived support	Students with higher grades perceived a higher level of support	Students with higher socio-cultural family background, higher educational aspirations, and higher grades in German as well as students who speak German less often at home tend to perceive a higher level of support	Students who speak German more often at home perceived a higher level of support

5.3.4. School 5

In contrast to *schools 2 and 3* but in line with *school 4*, teachers at *school 5* saw themselves as participating actively in developing support measures. This went hand in hand with the teachers' orientation towards a school-internal collectivity. The teachers saw this collectivity as providing some relief, as unburdening them in their own professional activity.

In contrast to all of the other schools, the teachers at *school 5* showed an orientation towards a performance standard and an individualized learning approach. This means that all students work on the same topic and the teachers try to adapt the content to the individual performance levels of the students. In comparison with other group discussions, differences between the students were only made a subject of discussion with regard to the support of newly arrived migrant students lacking sufficient German language skills. However, the results showed that at this school, this additional support was limited in terms of time. Newly arrived migrant students speaking foreign languages were assigned at first to the lowest (ability) sections. They also received German as a Second Language instruction at lunchtime for a limited period of time. However, if they did not achieve the expected performance goal at the end of the additional learning time outside the classroom, this was attributed to a lack of basic cognitive abilities and no longer to language deficits. Therefore, no additional support was to be provided to these students.

This somehow restricted support system at *school 5* is also reflected in the quantitative results: On the one hand, students with less use of German language at home felt better supported by trend than those with more frequent use of German at home. On the other hand, however, students with higher performance in German, higher educational aspirations, and higher socio-cultural family background tended to feel better supported than their peers. Therefore, the orientation towards a performance standard was identified in the quantitative as well as in the qualitative findings; however, the orientation towards an individualized learning approach was only found in the communicative knowledge of the teachers was not represented in the perspectives of the students.

5.3.5. School 7

In the group discussion at *school 7*, it became evident that students were pragmatically assigned to already existing support measures regardless of their actual needs. Further, comparable to *school 2*, support for students who in the opinion of the teachers were not able to improve their performance through additional support was seen as a waste of support resources. Therefore, they would not provide additional support to these students.

This is partially in line with the student questionnaire, which revealed that especially students with less frequent use of German language at home felt less supported, but no association with educational aspirations, socio-cultural family background, or performance was identifiable, which might have been expected based on the qualitative results. Accordingly, in line with *schools 2 and 5*, teachers at *school 7* focused on students that had the potential to improve their performance, although the results at *school 7* were not as pronounced as at *schools 2 and 5*.

6. Discussion

This case study aims at understanding the provision of support to students in primary school. We assumed that providing and receiving support at primary schools is based not only on teachers' individual values or competencies but also on forms of school organization. Consequently, we expected that even though the schools are situated in comparable contexts with similar socio-cultural conditions, different school-based supporting milieus will emerge that cover support measures for specific students more or less adequately. Fend's (2008) opportunities/utilization model of school quality and Weick's (1976, 1995) sensemaking approach served as the basis for the analyses.

The results confirm our expectations partially. Regarding the first research question (RQ 1), as expected the results revealed that not all students felt equally well supported by their teachers.

Systematic effects could be seen in almost all of the analysed students' characteristics and schools.

Considering the objective condition that all of the schools examined have a high percentage (ca. 60%) of students with a migration background, it is striking that at four out of five schools (*schools 2, 4, 5, and 7*), those students perceived higher support whom the teachers might rate as having the potential to improve their performance: higher performing students, students with higher socio-cultural family background and students with higher educational aspirations for lower secondary schools. Therefore, these schools seem to be oriented towards students that previous studies have called 'bubble kids' (Booher-Jennings, 2005; Brown & Clift, 2010; Krieg, 2008) This type of support milieu is closely related to an increase in social inequality (Gomolla & Radtke, 2009). As the qualitative analyses show, it is remarkable that some of the teachers in these schools believe that promotion of lower performing students and students with lower socio-cultural family background and lower educational aspirations is a burden or a waste of time.

Only at *school 3* was no systematic association between the perceived ISFT and students' characteristics found. Therefore, the implemented support measures at this school might not be restricted to a special group of students, but they also do not have the potential to close the gap between different social groups of students (Kyriakides et al., 2019). Whether it is really equally available for all, however, has to be analysed in further studies, because it could be that other student characteristics that have not yet been analysed, such as gender, are related to differential support as well.

The question now is if there are any significant differences between the schools, taking into account the quantitative data. Indeed, as expected, some differences were visible. However, after Holm-Bonferroni correction due to multiple pair comparisons, only one systematic difference between *school 3 and 4* remained. In contrast to *school 3*, where no significant associations between students' individual characteristics and ISFT could be identified, at *school 4* students with better grades in mathematics felt better supported than students with lower grades. Therefore, our hypothesis based on the quantitative data can only be partially corroborated. One problem might be that the sample sizes in the analysed primary schools are quite small (Cohen, 1988; Field, 2018). Accordingly, it would be important to examine this research question at larger schools.

Interestingly, migration background does not seem to be associated with teachers' differential support strategies, although many studies found that migrants are basically disadvantaged when it comes to educational opportunities (Becker & Schubert, 2011; Gomolla & Radtke, 2009). It might be that this result can be explained by the study sample, because all schools are explicitly supported by the state authorities due to their high percentage of students with a migration background. Therefore, they might be more sensitive with regard to possible discrimination practices. However, this point has to be investigated in further studies.

Regarding the second question (RQ 2), our results point to several different support milieus, as expected. We identified support milieus that have the potential to reproduce inequality and support milieus that have both compensatory and inequality reproducing support strategies implemented at the same time. However, non-discriminatory systems could not be found.

Inequality reproducing support milieus seem to be implemented particularly at *school 2* and partially at *school 7*. Based on the qualitative data, the teachers at both of these schools focus on good performers and students with potential for high performance. In the quantitative data, we see similar results, although due to the non-significant differences between these schools and other schools, the empirical evidence is limited.

Only at *schools 4 and 5* do compensatory support strategies seem to be implemented, at least partially. At these schools we identified an orientation of providing support to students with needs. However, the results at *school 4* point to a conflicting situation: On the one hand, the teachers at this school, having a long tradition of cooperation, identify some range of action for supporting their students. A collective school-internal development process was established on how to work efficiently and compensatorily. On the other hand, however, due to the perceived limited resources to

support all students, the teachers feel that in this selective system, only long-ranging support of some and not all students is possible. Therefore, as the quantitative results showed, the focus is on higher performing students who might succeed in being admitted to *Gymnasium*. In this regard, we identified also a significant difference from *school 3*, where there was no association between the students' perceived individual support from the teachers and students' achievement level. However, as the group discussion revealed, at this school a risky constellation for teachers can be identified: Due to the education policy developments leading to an integrative system, the teachers at this school feel greatly restricted in their professional action, and this is accompanied by a feeling of deprofessionalization. In contrast to *school 4*, however, at *school 3* a clear coping strategy with regard to the newly implemented integrative system cannot be identified, which might be the reason why no compensatory strategy for students with needs has been implemented.

School 5 is a new school in a socially disadvantaged area. A new team with rather strong leadership built up the school. The school follows an orientation towards a performance norm for all students. But contrary to the requirements of an integrative system, the support for students who do not speak German is only temporary and is provided outside the classroom, which can be identified as an indirect discrimination practice as described by Gomolla and Radtke (2009). It is noticeable that teachers attribute the failure of students with low German language skills in these extra lessons only externally, meaning that in their view it is the student's 'fault' that he or she was not able to use the provided extra help effectively and that it was not due to poor quality of the support provided in these extra language lessons (Fend, 2008). In the latter case, it is not exclusion of the students but instead quality development of teachers' instruction that would be a suitable strategy to increase the schools' quality of support.

These results are important, as they point to a possible explanation of why schools implement support systems that lead to systematic discrimination of some students. It seems to be the selective system that leads to a restriction of the support measures to some students that have the potential to succeed and are primarily interested and willing to engage in learning. This is in line with research studies on the effects of high-stakes accountability systems that show consistently negative effects on the support of students that are not perceived as having the potential to reach the respective goals (Booher-Jennings, 2005; Brown & Clift, 2010; Krieg, 2008). Therefore, changing the selective structures and regulations of education systems would be important to reduce the social pressure in order to support teachers in their professionalism (Becker & Schoch, 2018; OECD, 2016b). Nevertheless, further research should analyse in greater depth the reasons that lead to this type of support milieu, as there might also be more supportive solutions to deal with the system (Kyriakides et al., 2019; Muijs et al., 2004).

Further important findings of our study emerged. They show that the schools cannot be differentiated only in terms of support milieus but also in terms of teachers' perceived degree of their active participation in developing support measures. At *schools 2, 3, and (in part) 4*, teachers see themselves as having a limited range of action to support their students due to the education policy change in recent years from a separative to an integrative system, but at *schools 5 and (in part) 4*, there is a collective orientation towards participating actively in supporting students. In line with other studies (Nicolaidou & Ainscow, 2005; Senkbeil, 2005), these two types of schools can be interpreted as having active versus passive school development orientations. An active school development orientation and the belief that the challenges can be mastered is a central resource of schools that succeed at promoting above-average student performance development despite great structural and social challenges (Kyriakides et al., 2019; Muijs et al., 2004). In contrast, if schools see themselves as limited in their range of action, if they feel that they simply cannot support the students that would actually be worth supporting and according to what would make sense from their genuine 'professional' point of view, then the conditions are unfavourable for successful promotion of all students at these schools or for implementation of compensatory strategies to support particularly students with needs.

In sum, the qualitative data revealed different teachers' perceptions of different groups of students' need for support, and this indicates organization-specific collective sensemaking (Weick, 1995) and recontextualization processes (Fend, 2008). These are affected by teachers' assessment of

the ability to act at the school level regarding institutional arrangements and also by teachers' perception of the social context of the student body. In the perception of the institutional and social context there are school-specific characteristics. On the supply side, this can lead to a focus on providing support measures to specific groups of students and thus holds a potential for discrimination, if this focusing is linked with attributes that are not performance related, such as migration background, and if the support strategies are not compensatory. Therefore, if education systems are selectively structured, as in Switzerland, political regulations have to provide additional support to schools and teachers in order to achieve both non-selective support of all students, compensatory support for students with needs, and high self-efficacy of teachers and schools.

7. Methodological limitations and outlook

The main limitation of the data presented is the focus on only five primary schools in a specific urban region with comparably challenging socio-contextual conditions. Accordingly, the validity of these analyses is limited to the context analysed.

Further, the typology for qualitative data is based on group discussions among teachers having no organizational responsibilities such as leadership roles. It would be of interest to find out whether similar patterns could be found under different contextual conditions and in a wider context.

Also, the study only analysed the perceptions of students and teachers on providing and receiving support. Particularly for identifying subjective orientations and sensemaking in schools, these are important methodological approaches to analysing the research questions. However, more performance-related measures, for instance observations in the schools, could aid better understanding of the support milieus in schools.

Additionally, it would have been favourable to include extended measures for assessing individual characteristics of the students, particularly for assessing students' family socio-cultural background. But with the necessity to keep the questionnaire as short as possible, we were able to include only one item that has been shown to be reliable in primary school student samples, however (Paulus, 2009).

Furthermore, it would be interesting to identify the most important predictors for explaining the differences between students' perceptions of receiving support by applying multiple regression and not only correlational analyses. However, the primary schools examined, which are representative in terms of their size for all primary schools with a high mixed index in Zurich, were too small. Therefore, only bivariate analyses were possible, and the identification of effects was methodologically restricted.

Additionally, multilevel analyses would also be interesting, since the focus of the analyses is on teachers within schools. However, as we followed a qualitative approach, this was not in the scope of our analyses. Nevertheless, for future research, it would be important to analyse the support milieus in a large school sample, taking into account the multilevel structure of education systems. Furthermore, since our study is only correlative in nature and is not able to identify causal effects, longitudinal analyses could extend our results substantially.

Also remaining open is the central question as to the effect of the support milieus on promoting students' learning and development of competencies. Regarding context-sensitive support for the heterogeneous needs of students, further light should be shed on schools where teachers feel limited in their action in their everyday work and in implementing a performance-oriented support system.

Notes

1. The group discussions were conducted in German and translated into English. We labelled the teachers participating 'teacher A', 'teacher B', 'teacher C', etc., based on the order in which they first spoke in the discussion.

2. Students released from learning goals are not required to reach the aims of the official education plan; instead, they have individual learning goals.

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