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Teaching practices and beliefs about inclusion of general and special needs teachers in Austria

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Self-reports of primary and secondary school teachers who teach in general and special education classrooms in Austria were examined in terms of their engagement in teamwork (between special and general education teachers), instructional methods that they use, factors that positively influence inclusive education, and their needs for training. The by far largest group of special needs students are the ones with learning disabilities. Special needs teachers in secondary education reported to use exploratory learning methods more often than general teachers. While the teachers indicated that a positive and respectful school climate and teamwork (co-teaching) were the two most important factors influencing inclusion success, teachers reported to only sometimes work in teams. The teachers indicated little need for training, but reported needs regarding "dealing with challenging behavior". The results of this study seem to imply that to reach successful inclusion practices, appropriate school policy, new curricula and sufficient teacher education must be provided in order to achieve changes in teachers' beliefs, attitudes and behavior.

Keywords: Austria, inclusive education, special needs education, continued education needs

Introduction

Over the last 30 years, the Austrian school system has developed towards an inclusive school system, starting with the first Austrian integration class that was installed as a school experiment in 1984 and the formal endorsement of school inclusion by Austrian school law in 1993 (Schwab, Hessels, Obendrauf, Polanig, & Wölflingseder, 2015). However, 20 years after inclusion was endorsed by Austrian law, still large variations in inclusion rates are found between the individual federal states (from 29.8% in Tirol to 79.1% in Styria; Statistik Austria, 2014). Also, still relatively little is known about the inclusive practices of general and special needs teachers in Austria, their beliefs about factors influencing inclusive education and their continued education needs, hence the focus on these variables in this article. Furthermore,

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as many countries have ratified the UN-Convention on the Rights of Persons with Disabilities, not only Austrian teachers, but teachers all over the world may be actors in the process of change towards inclusive schooling (Bürli, 2009; Meijer, 2010). The current insights may therefore be of relevance to teachers, policy makers, researchers and other actors in this process everywhere in the world.

In this article we will use the general term special educational needs (SEN), as we will consider all students within this category, not only students with learning disabilities. However, in Austria, the vast majority of students with SEN are diagnosed as having learning disabilities (71.1%), followed by intellectual disabilities (9.8%) and behavioral problems (9.7%). About six percent (5.9%) of the students have sensory disabilities, 1.9% have physical disabilities and 1.7% are diagnosed as having speech and language disorders (Schwab et al., 2015). According to Gebhardt, Krammer, Schwab, Rossmann, and Gasteiger-Klicpera (2013) poor reading skills and poor basic arithmetic skills are the strongest predictors for being diagnosed as having a learning disability in Austria. Moreover, even though IQ is not a criterion for diagnosing a learning disability, in practice, most of these students have a below average IQ (Schwab et al., 2015). Because of the high percentage of students with learning disabilities within the group of students with SEN, the present research can be considered particularly relevant for teachers working with students with learning disabilities.

The meaning of the term inclusion is often unclear and there is a lack of consensus with regard to its definition. Often, the terms 'integration' and 'inclusion' are used interchangeably (Bartolo, 2010) and, depending on cultural factors, they appear difficult to differentiate even though they do not seem to imply the same phenomena. Avramidis and Norwich (2002) showed that the terms are frequently used as synonyms in the scientific literature. In some studies, inclusion is understood as a collective physical school placement of children (of the same age) with and without disabilities (Reynolds & Fletcher-Janzen, 2000). However, this rather corresponds to our understanding of integration (Nimante & Tubele, 2010; Sander, 2005) and is compatible with a minimal definition of inclusion (Ainscow et al., 2006). In German-speaking areas, a broad definition of inclusion (Ainscow et al., 2006) is generally used in which all children in a class are regarded as individuals with different initial positions, who should all benefit from the best possible opportunities for learning without the need to differ between students with and without SEN. Inclusion is thus based on the idea that schools should not focus on disabilities, but consider all students and their learning individually (Sharma, Loreman, & Forlin, 2012). Furthermore, inclusive education not only consists of teaching all students within the same classrooms, but also pertains to the social inclusion of all (Bossaert, Colpin, Pijl, & Petry, 2011; Huber, 2006).

According to the Index for Inclusion (Booth & Ainscow, 2002), school culture, policy and practice are key factors for inclusive education. However, the most important factor in inclusive education is the teacher (Moen, 2008). Since inclusion has increased it is more difficult for teachers to meet the wide range of individual needs of the students. Teachers' responsibilities have changed, as have the skills needed to be both a general and a special needs teacher. Often, special needs teachers have to teach multiple subjects across different grade levels without adequate resources

(for example in terms of training, class size or teacher resources) and, on the level of national policy, it is not well defined how academic skills can be well instructed (see Gebhardt, Schwab, Krammer, & Gegenfurtner, 2015).

In general, differences exist with regard to the education and training of general and special needs teachers. For example, general teachers appear less sensitive to diversity and less aware of inclusive pedagogic strategies than special needs teachers (Moliner, Sales, Ferrández, & Traver, 2011). The fact that teachers are not always qualified to teach children with special educational needs has been shown in several studies (Pijl, 2010; Starczewska, Hodkinson, & Adams, 2012). The review by Nimante and Tubele (2010, p. 170) concludes that "teachers lacked the experience and knowledge of psychology, social pedagogy and special pedagogy needed to understand the difficulties that children might encounter in learning". Therefore, many teachers believe "that pupils with special needs are generally better off in segregated settings and that these students need the specialist knowledge and experience available in special schools" (Pijl, 2010, p. 10).

From a traditional teacher role perspective, in which the special needs teacher is seen as an additional resource whose job it is to focus on students with special educational needs only, the general teacher focuses on teaching the students without special needs. Consequently, general teachers may feel responsible for only a part of the students while the remaining students are under the responsibility of the special needs teacher (Evans & Lunt, 2002). In contrast, teachers in inclusive settings should value the diversity of all learners, support all students and foster collaboration and teamwork in class (European Agency, 2012). In this context, the general teacher is often seen as the main responsible "teacher" and the special needs teacher as the "assistant" with a subordinate role (see the meta-analysis by Scruggs, Mastropieri, & McDuffie, 2007). However, in most parts of Europe the special needs teacher is not a paraprofessional assistant, but a fully qualified teacher with specialized training in special educational needs (Giangreco, 2010; Webster, Blatchford, Bassett, Brown, Russell, & Russell, 2010). Kilanowski-Press, Foote and Rinaldo (2010) interviewed 71 teachers in inclusive classes and found out that only 58 of them had the assistance of a consultant special education teacher. The support of the special education teachers was mainly used for planning and small group instruction as well as one-to-one student assistance. Only eight teachers reported to do teamwork, but merely for less than an hour per day.

Co-teaching appears beneficial for students with disabilities (Friend, Cook, Hurley-Chamberlain, & Shamberger, 2010; Weichel Murawski & Swanson, 2001) and is considered an important step towards real inclusive schooling, next to, for example, the use of high quality professional development to improve teacher practices (Waldron & McLeskey, 2014). Co-teaching is defined by Friend et al. (2010) "as the partnering of a general education teacher and a special education teacher or another specialist for the purpose of jointly delivering instruction to a diverse group of students, including those with disabilities or other special needs, in a general education setting and in a way that flexibly and deliberately meets their learning needs" (p.11). Thus, the general and special needs teacher should bear joint responsibility for the lessons (Kloo & Zigmond, 2008). Above all, real inclusive education necessitates continuous strong collaborative teaching, including equal responsibility for both teach-

ers in every step of the collaborative process, such as, for example, in instructional planning and classroom routines (Cook & Friend, 1995), but its success depends on professional preparation of the teachers, the way it is implemented and a supportive, collaborative school culture (Friend et al., 2014; Waldron & McLeskey, 2014).

Experts consider the quality of the cooperation of general and special needs teachers as an indicator of the quality of teaching in inclusive settings (European Agency, 2010). Inclusive education also needs instructional methods that meet the principles of inclusive teaching. The heterogeneous composition of the class and accompanying conditions for learning make it impossible for all students to learn at exactly the same pace. Consequently, inclusive education will require a high percentage of open learning, such as working with a weekly schedule for individual students, different learning stations, differentiated instruction and discussion groups (Heimlich, 2007). Holzinger, Ebner, Kernbichler, Kopp-Sixt, Much and Pongratz (2011) adapted The Index for Inclusion (Booth & Ainscow, 2002) to the demands of the Styrian school system and, using a mixed methods approach focusing on school development in secondary schools, showed that teachers identified teamwork, communication about instructional methods and diagnosis, as well as small and stable teams as the main factors fostering a positive inclusive practice (see also Holzinger, Kernbichler, Kopp-Sixt, Much, & Pongratz, 2011).

The positive impact of inclusion on the school achievement of students with and without special educational needs (SEN) and, in the long run, the greater social skills of these students compared to students in special schools has been shown in multiple studies (Baker, Wang, & Walberg, 1995; Bless & Mohr, 2007; Carlberg & Kavele, 1980; Eckhart, Haeberlin, Sahli Lozano, & Blanc, 2011; Haeberlin, Blanc, Eckhart, & Sahli-Lozano, 2012; Haeberlin, Bless, Moser, & Klaghofer, 1991; Merk, 1982; Ruijs & Peetsma, 2009). Likewise, it has been shown that students without SEN in inclusive classes show equal or better school performances than children without SEN in regular classes (Cole, Waldron, & Majd, 2004; Demeris, Childs, & Jordan, 2007; Feyerer, 1998; Gandhi, 2007; Huber, Rosenfeld, & Fiorello, 2001; Kalambouka, Farell, Dyson, & Kaplan, 2007; Preuss-Lausitz, 2009; Ruijs & Peetsma, 2009; Ruijs, Peetsma, & Van der Veen, 2010; Sermier Dessemontet & Bless, 2013; Wocken, 1999), including when the children with SEN in the inclusive class have intellectual disabilities (McDonnell, Thorson, Disher, Mathot-Buckner, Mendel, & Ray, 2003; Sharpe, York, & Knight, 1994). From a financial perspective, full inclusion would be the most economic education system in Austria, considering short- and long-term costs (Schönwiese, 2008). In the long run, Austria will probably close special schools as a result of the ratification of the UN Convention (Schwab, Gebhardt, Ederer-Fick, & Gasteiger-Klicpera, 2012).

In Austria, school education begins at the age of six in primary classes (Grades I to IV), whereas secondary education I (secondary middle school, which generally coincides with the last years of compulsory education) starts at the age of 10 and lasts for four years. Integration classes (i.e., classes in which children with SEN are included and support by a special needs teacher is available for a limited number of hours) have been in place in the Austrian school system for over twenty years. The change towards inclusive education is more recent and is essentially characterized by

classes taught by both a general and a special needs teacher. An important question in Austria is how to improve from integrative settings to inclusive forms of education.

Most of the Austrian special needs teachers mainly feel responsible for supporting the students with disabilities and ensure that special needs students are adequately taught in the inclusive classrooms. Rarely, both teachers feel responsible for supporting all children, whether or not they have disabilities (Specht, Pirchenegger, Seel, Stanzel-Tischler, & Wohlhart, 2006). Although collaboration in teams is considered very important for inclusive education, we still know relatively little about the interaction and collaboration in the teacher teams in Austria (Specht, Pirchenegger, Seel, Stanzel-Tischler, & Wohlhart, 2007). Professionals are supposed to work together in teams and also to teach in teams, but so far, teachers have not been trained for team-teaching. Holzinger (2006) concluded, on the basis of a survey of 50 students enrolled in pre-service teacher training, that primary school practice showed a remarkable quota in teaching collectively with shared responsibilities, whereas secondary school practice more featured remedial teaching with the general teacher teaching the main group and the special needs teacher teaching a small group of students with special needs. More recent research showed that Austrian teachers rate themselves quite high with regard to collaboration and teaching (Gebhardt, Schwab, Gmeiner, Ellmeier, Rossmann, & Gasteiger Klicpera, 2013; Holzinger & Kopp-Sixt, 2011; Specht et al., 2006). Moreover, general teachers and special needs teachers seem to rate their teamwork on a similar level (Gebhardt et al., 2013). However, it is difficult to imagine that collaboration and teamwork are well established (as it was not taught to prospective teachers) and it seems very likely that the positive picture of team-teaching in Austria results from a social desirability bias.

Finally, in the context of the essential role of teachers for successful inclusive education, it must be mentioned that teacher training for primary and secondary middle schools in Austria is not conducted at university level, but consists of a three year study at the level of higher vocational education (Pädagogische Hochschule). All prospective teachers have a few weeks in-service training per year, but until recently it was not mandatory for students to work at least once in a special or inclusive class. Besides, some provinces lack inclusive classes implying that not all students can enter an in-service training in classes with children with special needs. Moreover, most teachers, objectively, lack pedagogical knowledge in the field of special educational needs, which is concurrent with international research findings (Abbott, McConkey, & Dobbins, 2011; Avramidis, Bayliss, & Burden, 2000; Sharma, Forlin, & Loreman, 2008).

As mentioned before, little is known about the special practices of teachers in Austria. In this study, we first want to find out which instructional methods teachers generally use and whether general and special needs teachers differ in this respect. Secondly, factors that have a possible positive influence on inclusive education work (Booth & Ainscow, 2002) are examined. Which factors, according to the teachers, influence the success of inclusion and are these the same for general and special needs teachers? Furthermore, it can be assumed that teamwork will be seen as a highly important factor for inclusive education. If confirmed by the data, the quality of teamwork will be further analyzed. Differences between general teachers and special needs teachers are examined in relationship to gender, teaching experience and school level.

Additionally, regarding the teacher training system in Austria, it can be assumed that most general teachers have not been trained for teaching students with special educational needs and that they need to change their educational practices. Thus, the last question focusses on what kind and how much further inclusive education training general and special needs teachers need.

Method

Sample

The sample was recruited with the help of special education centers (SECs), which are responsible for the care of students with special educational needs. The questionnaires were distributed by the SECs' directors, who sent or brought the questionnaires to the schools and asked for participation. The teachers were informed of the study's purpose and that participation was voluntary. The teachers completed the questionnaires individually at a time of their convenience and returned the completed questionnaires anonymously to the university by regular mail. The three-page questionnaire took about 15 to 20 minutes to complete. Teachers from 88% of the schools in all 19 school districts of Styria took part in the survey. The sample was composed of 212 general teachers (162 females and 42 males) and 128 special needs teachers (120 females and 8 males), all working in inclusive settings. 128 teachers worked in primary schools (66 general and 62 special needs teachers) and 182 teachers worked in secondary schools (117 general and 65 special needs teachers). The general teachers were about six years older than special needs teachers (M_{age} = 48.9, SD_{age} = 9.1 and M_{age} = 42.4, SD_{age} = 8.9, respectively; t_{330} = 5.499, $p \leq .001$) and, consequently, also had about six years more teaching experience (M_{teach} = 24.2, SD_{teach} = 11.6 and M_{teach} = 18.1, SD_{teach} = 10.3, respectively; t_{333} = 4.791, $p \leq .001$). Special needs teachers, as could be expected, had three years more experience with inclusion (M_{exp} = 11.7, SD_{exp} = 6.7 and M_{exp} = 8.3, SD_{exp} = 6.7, respectively; t_{323} = 4.884, $p \leq .001$).

Measures

The teachers were asked about the number of years of experience they had in integrative settings and the number of integrative classes in which they taught. Furthermore, the teachers were asked about the type of their students' special needs with open ended questions. The teachers' answers were clustered according to the following categories: students with an intellectual disability (ID), students with a sensory disability (SD), students with a learning disability (LD), students with autism and students with special educational needs taught within the regular curriculum (RC).

In order to assess the instructional methods the teachers used, they were asked to indicate on a five point rating scale (1 = never, 2 = rarely, 3 = once a week, 4 = 2-3 times a week, 5 = daily) how often they practiced the following methods: a) Partner work; b) Group work; c) Working with weekly schedules; and d) Other open forms of instructional methods (e.g., different learning stations, differentiated instruction and discussion groups).

On the basis of the preliminary work of Holzinger, Ebner et al. (2011) the following factors influencing inclusive educational work were included in the survey: a) A positive, respectful school climate; b) Democratic leadership style of the school

management; c) Teamwork by teachers; d) General structure at school level; e) Heterogeneity of class performance; and f) Reduction of administrative work. The rating scale system ranged from 1 = hindrance to 7 = conducive to inclusive work.

Next, a modified subscale from Holzinger, Ebner et al. (2011) was used to assess teamwork. Contrary to the original study by Holzinger, Ebner et al. (2011), in which the teachers were asked to answer the questions in reference to themselves, the present instructions incited the teachers to rate their whole team or the teamwork on the aspects of cooperative planning of instruction, cooperative team-teaching and cooperative reflection upon instruction. The five point rating scales had anchors 1 = never and 5 = always) and showed high reliability ($\alpha = .88$).

Furthermore, the teachers were asked to estimate (five point rating scale with anchors 1 = no necessity and 5 = high necessity) their continued education needs in: a) Teamwork; b) Cooperative and open teaching methods; c) Pedagogical diagnostic competences; d) Performance assessment; e) Dealing with challenging behavior; f) Expertise in individual subjects; g) Intervention for children with reading and writing difficulties; h) Intervention for children with dyscalculia, and i) Knowledge about special education needs (e.g. autism, deafness, intellectual disability).

Analyses

The analyses consist of multivariate analyses, comparing general and special needs teachers, followed by univariate analyses for group differences on individual variables (when a significant multivariate effect exists), within primary and secondary education, respectively. It was decided to perform all analyses for primary and secondary school teachers separately, because an important difference exists between primary and secondary school teachers: Primary school teachers generally teach in one class with approximately 23 hours of support by one special needs teacher. In contrast, teacher teams in secondary schools generally consist of five or six teachers. The general teacher teaches only one or two subjects in one class and, therefore, the special needs teacher is the only permanent teacher. It must be noted that, due to missing values (not all teachers responded to all questions), the effective sample size for the separate analyses may often be smaller than the total sample size.

Results

Instructional Methods

As some differences exist in the sample with regard to age, experience as a teacher and experience with inclusion, first a multivariate analysis with Partner work, Group work, Working with a weekly schedule and Other open forms of instructional methods as dependent variables, type of teacher as factor, and age, experience as a teacher and experience with inclusion as covariables was executed for primary and secondary school, respectively. Since the three covariables were never significant, these were excluded from further analysis. The second multivariate analysis showed that the teacher effect was not significant in primary school (Wilk's $\lambda = .962$, $F\,[4,104] = 1.029$, *ns*, $\eta^2 = .04$). In secondary school, however, a significant teacher effect was found (Wilk's $\lambda = .899$, $F\,[4,150] = 4.222$, $p \leq .01$, $\eta^2 = .10$). The univariate F-tests further showed significant differences for Partner Work ($F\,[1,153] = 4.226$, $p \leq .05$,

η^2= .03) and Working with a weekly schedule (F [1,153] = 14.530, $p \leq .001$, η^2= .09). Special needs teachers rated themselves higher on these variables than general teachers. Table 1 shows the means and standard deviations regarding the instructional methods the general and special needs teachers indicated to use in primary and secondary education, respectively. Also, univariate F-tests for differences between the two types of teachers are presented when a multivariate effect was found. The mean scores show that both primary and secondary education teachers indicated to rarely use these instructional methods in their everyday teaching. The empirical means of all questions are below the theoretical mean of the scales (3 = once a week), except for partner work indicated by special needs teachers in secondary education (exactly at 3.00). The mean score of this group is considered significantly higher than the mean rating of the group of general teachers in secondary education (2.70). The special needs teachers in secondary education also have a significantly higher mean score (2.29) on "Working with a weekly schedule" than the general teachers (1.54). Working with a weekly schedule is very rarely reported by general teachers, both in primary and secondary education and by special needs teachers in primary education.

Table 1. *Means and standard deviations regarding "didactic methods" (1 = never, 5 = daily) for general teachers and special needs teachers in primary[a] and secondary education[b], respectively, as well as univariate F-tests for differences when a significant multivariate effect is found.*

	General teachers		Special needs teachers		Univariate analyses		
	M	SD	M	SD	F	df_1, df_2	*p*
Primary School							
Partner work	2.98	0.81	2.70	0.90			
Group work	2.20	0.95	2.22	0.90			
Weekly schedule	1.73	1.03	1.76	1.12			
Other instructional methods	2.58	0.99	2.48	1.01			
Secondary School							
Partner work	2.70	0.89	3.00	0.87	4.226	1,153	.04
Group work	2.13	0.97	2.34	0.84	1.823	1,153	.18
Weekly schedule	1.54	1.09	2.29	1.32	14.530	1,153	.00
Other instructional methods	2.02	1.11	2.27	1.02	1.897	1,153	.17

a Primary school general teachers N = 54; primary school special needs teachers N = 55
b Secondary school general teachers N = 99; secondary school special needs teachers N = 56

Factors influencing inclusive educational work

A first multivariate analysis showed that age, experience and experience with inclusion had no significant effects, so these were again excluded from the analysis. The second multivariate analysis with Positive respectful school climate, Democratic leadership by management, Teamwork of teachers, General framework at school level, Heterogeneity of class performance and Reduction of administrative work as

dependent variables and type of teacher as factor showed neither a significant effect in primary school (Wilk's $\lambda = .925$, F [6,106] = 1.438, *ns*, $\eta^2 = .08$), nor in secondary school (Wilk's $\lambda = .968$, F [6,149] = 0.826, *ns*, $\eta^2 = .03$). The mean ratings of general and special needs teachers regarding factors influencing inclusive educational work are presented in Table 2. Both groups of teachers in both levels of education acknowledge that these factors, with means varying from 4.83 to 6.84, are favorable for inclusive teaching (the theoretical scale mean was 4). In both primary and secondary education, teachers report that a positive and respectful school climate, democratic leadership by management and teamwork of teachers are the most important. Heterogeneity of class performance on the other hand, is indicated to be the least helpful (but the mean score is still well above the theoretical mean).

Table 2. ***Means and standard deviations regarding "factors influencing inclusive educational work" (1 = hindrance, 7 = conducive to inclusive work) for general teachers and special needs teachers in primary[a] and secondary education[b], respectively.***

	General teachers		Special needs teachers	
	M	SD	M	SD
Primary School				
Positive school climate	6.75	0.64	6.66	0.72
Democratic leadership	6.61	0.82	6.50	0.85
Teamwork by teachers	6.84	0.37	6.55	0.76
General school structure	5.96	1.34	5.96	1.29
Heterogeneity of class performance	5.86	1.37	5.55	1.43
Reduction of administrative work	5.95	1.54	5.82	1.66
Secondary School				
Positive school climate	6.23	1.27	6.26	1.22
Democratic leadership	6.03	1.32	5.66	1.47
Teamwork of teachers	6.02	1.27	6.04	1.29
General school structure Heterogeneity of class	5.46	1.67	5.45	1.64
performance	4.83	1.48	5.08	1.28
Reduction of administrative work	5.24	1.84	5.25	1.85

a Primary school general teachers N = 57; primary school special needs teachers N = 56
b Secondary school general teachers N = 103; secondary school special needs teachers N = 53

Teamwork

With regard to teamwork in primary education, the multivariate analysis shows that age (Wilk's $\lambda = .929$, F [3,111] = 2.832, $p \leq .05$, $\eta^2 = .07$) and experience as a teacher (Wilk's $\lambda = .927$, F [3,111] = 2.897, $p \leq .05$, $\eta^2 = .07$) are significant covariables, but no differences are found between general and special needs teachers (Wilk's $\lambda = .994$, F [3,111] = 0.213, *ns*, $\eta^2 = .01$). In secondary education, age, experience as a teacher and experience with inclusion are not significant and, thus, excluded from the analysis. The multivariate analysis further showed a significant teacher effect (Wilk's $\lambda = .942$, F [3,169] = 3.458, $p \leq .05$, $\eta^2 = .06$). Nevertheless, the univariate anal-

yses showed no significant difference in teachers' self-reports on the three variables. Table 3 presents the mean scores of Cooperative planning of instruction, Cooperative team-teaching and Cooperative reflection upon instruction. The mean scores are slightly higher than the theoretical mean of 3 in primary education (means varying from 3.17 to 3.34), but slightly lower (means varying from 2.48 to 2.97) in secondary education. It shows that the four groups of teachers report to only sometimes do teamwork.

Table 3. ***Means and standard deviations regarding "teamwork" (1 = never, 5 = always) for general teachers and special needs teachers in primary and secondary education, respectively, as well as univariate F-tests for differences when a significant multivariate effect is found.***

	General teachers		Special needs teachers				
	M	SD	M	SD	F	df_1, df_2	*p*
Primary School							
Planning instruction	3.29	0.79	3.34	0.84			
Team-teaching	3.20	0.91	3.17	0.85			
Reflexion instruction	3.22	0.83	3.25	0.88			
Secondary School							
Planning instruction	2.77	0.93	2.69	1.00	0.287	1,171	.59
Team-teaching	2.80	1.02	2.97	0.91	1.145	1,171	.29
Reflexion instruction	2.63	0.90	2.48	1.18	0.857	1,171	.36

a Primary school general teachers N = 59; primary school special needs teachers N = 59
b Secondary school general teachers N = 111; secondary school special needs teachers N = 62

In order to analyze which aspects predict the extent of teamwork, a linear regression analysis was conducted with teamwork total score as the dependent variable and gender, general teaching experience, experience with inclusive teaching and school level as predictors. The regression analysis showed that only school level (b = -1.42, SE = .291, β = -.28, t = -4.86, $p \leq .01$) was a significant predictor (F [1, 279] = 23.61, $p \leq .01$, R^2 = .078), showing that the lower scores were found in secondary education and the higher scores in primary education.

Teachers' continued education needs

With regard to teachers' continued education needs, age, teaching experience and experience with inclusion showed no significant effects and were excluded from the subsequent analyses. The subsequent multivariate analyses showed that no significant differences exist in continued education needs reported by general and special needs teachers, both in primary (Wilk's λ = .945, F [9,101] = 0.653, *ns*, η^2= .06) and secondary education (Wilk's λ = .947, F [9,146] = 0.911, *ns*, η^2= .05). Table 4 shows the means and standard deviations regarding "continued education needs" (1 = no necessity, 5 = high necessity) reported by general teachers and special

needs teachers in primary and secondary education, respectively. The low mean scores in both primary and secondary education show that the teachers indicate that they hardly need training. The empirical means were mostly below the scales' theoretical means of 3, which would indicate average need. The highest means were found for "dealing with challenging behavior" and "knowledge about special education needs", both in primary and secondary education and for general teachers and special needs teachers alike, while "expertise in individual subjects" was rated the lowest.

Table 4. ***Means and standard deviations regarding "continued education needs" (1 = no necessity, 5 = high necessity) for general teachers and special needs teachers in primary and secondary education, respectively.***

	General teachers		Special needs teachers	
	M	SD	M	SD
Primary School				
Teamwork	1.55	1.42	1.76	1.36
Cooperative and open teaching	1.82	1.38	1.96	1.23
Pedagogical diagnostic competences	2.55	1.08	2.49	1.14
Performance assessment	1.73	1.27	1.85	1.08
Dealing with challenging behaviour	3.07	0.99	3.15	0.97
Expertise in individual subjects	1.09	1.15	1.31	1.22
Intervention in reading and writing	2.77	1.19	2.53	1.23
Intervention in dyscalculia	2.91	1.08	2.56	1.23
Knowledge about SEN	2.98	1.26	2.89	1.17
Secondary School				
Teamwork	1.72	1.31	1.98	1.37
Cooperative and open teaching	2.13	1.20	2.22	1.25
Pedagogical diagnostic competences	2.08	1.16	2.18	1.03
Performance assessment	1.91	1.22	1.90	1.18
Dealing with challenging behaviour	3.05	1.16	3.05	1.19
Expertise in individual subjects	0.95	1.05	1.07	1.21
Intervention in reading and writing	2.11	1.14	2.08	1.23
Intervention in dyscalculia	2.24	1.18	2.12	1.28
Knowledge about SEN	2.66	1.24	2.32	1.24

a Primary school general teachers N = 56; primary school special needs teachers N = 55
b Secondary school general teachers N = 96; secondary school special needs teachers N = 60

Discussion

The aim of the present study was to expand our knowledge about teaching in inclusive settings in Styria (Austria) and, from a teacher's point of view, to examining the needs for further training. As in other parts of Europe, Austrian schools are becoming increasingly inclusive, meaning that teachers are more and more required to teach students both with and without disabilities. This study provides a fairly representative overview about inclusive teamwork in Styria, since teachers from all 19 Styrian districts took part in the survey.

The first results showed that new forms of instructional methods are not part of the teachers' everyday work. Both general and special needs teachers indicate to only sometimes use new forms of instructional methods. In secondary schools, partner work and working with a weekly schedule are reported to be used more often by special needs teachers than by general teachers. According to the literature (Heimlich, 2007) heterogeneous class compositions need other forms of teaching. The results of the present study indicate that general teachers are more likely to be the teacher of children without special needs and, therefore, can teach all students at the same pace. Consequently, they do not indicate to need to use open forms of instructional methods as much as special needs teachers do.

Secondly, factors influencing inclusive educational work were examined. In general, according to the teachers, all factors proposed are advantageous for inclusive work. A positive and respectful school climate, democratic leadership by management, as well as teamwork are rated highly important by the teachers. No significant differences were found between general teachers and special needs teachers' reports. The fact that teamwork is beneficial for students with disabilities has already been shown (Friend et al., 2010; Weichel et al., 2001). Although teachers rate teamwork as important, they also indicate that it is not part of their everyday work. This result is consistent with literature (Kilanowski-Press et al., 2010). Moreover, concurrent with Gebhardt et al. (2013), general teachers and special needs teachers do not differ in their estimations about how often they do teamwork (cooperative planning of instruction, cooperative team-teaching and cooperative reflection upon instruction). The fact that teachers indicate not to work in teams may have to do with the fact that teamwork is not explicitly taught during teacher training, but also the fact that only the general teacher is responsible for the class (see Evans & Lunt, 2002) and that the special needs teacher is only present during certain hours may contribute to this attitude. Factors such as gender, general teaching experience and experience with inclusive teaching had no influence on teamwork.

Finally, teachers were asked to specify their continued education needs for inclusive education. Taking the current teacher education system in Austria into account, it was inferred that, objectively, most general teachers are not prepared for teaching students with special educational needs (see also, Abbott et al., 2011; Sharma et al., 2008). Nevertheless, the results showed that teachers hardly experience a necessity for training in this regard. The teachers do indicate that some training is needed in dealing with challenging behavior, followed by knowledge about special educational needs. Expertise in individual subjects received the lowest interest for training. Hence, dealing with challenging behavior seems to be the aspect that is most preoccupant for teachers. This finding corresponds to what is found in the literature about teachers' attitudes towards inclusion: Attitudes towards including children with behavioral disorders are much more negatively compared to those concerning inclusion of children with other disabilities (Gebhardt et al., 2011; Mand, 2007; Schwab et al., 2012). To our surprise, both general teachers and special needs teachers rated the necessity of the trainings proposed (teamwork, cooperative and open teaching methods, pedagogical diagnostic competences, performance assessment, dealing with challenging behavior, expertise in individual subjects, intervention for children

with reading and writing difficulties, intervention for children with dyscalculia and knowledge about special education needs) similarly as relatively unimportant. According to the literature, general teachers are less sensitive to diversity and less aware of inclusive pedagogic strategies than special needs teachers (Moliner et al., 2011), which might also explain why they experience low continued education needs in this fields. Special needs teachers, on the other hand, will consider themselves as experts for special needs and might therefore indicate low continued education needs. However, the special needs teachers might also be in need for additional training, since they were only trained for working in special schools and not for working in inclusive settings. Finally, the expert status of special needs teachers may turn them into the responsible person for students with special needs only (Evans & Lunt, 2002). As a consequence, general teachers might believe that they do not need much training or, even worse, think that special needs children should be sent to special schools and taught by specialists (Pijl, 2010). One of the ways to improve teachers' practices could be to explicitly include teamwork and team teaching in teacher education. Only when (prospective) teachers are trained to work together and to elaborate teaching programs together, each recognizing the specific competencies of the other, can beliefs, attitudes and practices of teachers be changed.

Working with self-report questionnaires first of all brings about limitations in the data obtained. These are presented from the perspective of the teacher and are not objective measures or observations of teachers' actual behaviors in class. Neither does it objectively inform us about how teachers work together, if at all. Secondly, the teachers participated on a voluntary basis which may have caused a certain bias in the sense that they were already motivated to participate in the study. Thirdly, a discrepancy between teachers' knowledge and capacities on the one hand and their needs for continued education on the other, can only be established through the evaluation of certified training the teacher has had and/or through more in-depth interviews during which the teacher can give thorough understanding in his/her way of working, beliefs and attitudes and educational needs. Nevertheless, we believe that this study has given some first insight in these factors and, in combination with our knowledge of teacher education, of what might be done in teacher training to further improve teachers' competencies needed for working in inclusive settings and for providing students with the best possible opportunities for learning.

To conclude, the ratification of the UN Convention on the Rights of Persons with Disabilities and the observation that full inclusion is the most economic educational setting (Schönwiese, 2008), Austria will probably move towards a full inclusive schooling system and close all (or nearly all) special schools. General and special needs teachers will have to ensure the best learning opportunities for all students, with or without disabilities. This implies that general teachers and special needs teachers will need to work in close collaboration (and not only as co-teachers), since not even the best teachers will be able to solve the problems in inclusive practice on their own. To achieve this, changes in teachers' and students' beliefs, attitudes and behavior are needed (Heimlich, 2003) and, for instance, appropriate school policy, new curricula and sufficient teacher education (at university level) are required (Forlin, 2010). Of course, inclusive education is not only teachers' work; it can only be successful if ev-

erybody (teachers, students, parents, principals, politicians, general population, etc.) works together. Evidently, the first step that has to be taken is the identification of all barriers that need to be overcome in order to successfully establish inclusive settings.

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